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EU-US ATLANTIS PROGRAMME

COOPERATION IN HIGHER EDUCATION AND VOCATIONAL TRAINING

Application Form

Excellence Mobility Project

CLOSING DATE FOR SUBMISSION: 23.03.2009

Applications sent by post bearing a postmark after this date will not be considered.

Applications must be submitted both
to the EU, to the EACEA (using this form) and
to the U.S.A., to FIPSE (using the American application form)

Application and selection procedure

Before completing the form, please read the *Guidelines for Call for Proposal 2009* which contains information on specific priorities for this year. This information can also be found on the EU-US websites:

http://eacea.ec.europa.eu/extcoop/usa/index_en.htm

http://europa.eu.int/comm/education/programmes/eu-usa/call_en.html

http://europa.eu.int/comm/education/programmes/calls/callg_en.html

- The form must be completed in one of the 23 official languages of the European Union. However, bear in mind that all partners have to be able to endorse the common proposal.
- The application must be typewritten or word-processed using a computer.
- The original of the application must bear the original signature of the person legally authorised to sign on behalf of the applicant institution and the original stamp of this institution.
- The signed original and 2 copies thereof must be sent in the same envelope.
- All applications will be acknowledged.

In accordance with standard Executive Agency practice, the information provided in your application may be used for the purposes of evaluating the EU/US programme. The relevant data protection regulations will be respected. Applications will be judged against the eligibility and quality criteria set out in the *Guidelines for Call for Proposal 2009*.

1. TITLE PAGE

Project title

Please use a maximum of 12 words

TransAtlantic Biosystems Engineering Curriculum and Mobility

Acronym

Give a short title to your project, max 10 characters

TABE.NET

Project abstract (maximum 5 lines)

Describe activities and outcomes and including the number of mobile students in the project

Participating institutions are Virginia Polytechnic Institute and State University (lead US) and University of Illinois (US partner) and University College Dublin, National University of Ireland (lead EU), Agricultural University of Athens, Universidad Politecnica de Madrid, and University of Bari from the EU. The overall goal is to advance internationalization of Biosystems Engineering (BE) curricula and develop a global awareness within the discipline. Activities will include identifying core threads of the discipline, creating a database of multinational examples that will globalize core BE courses, and developing several innovative courses. Student (24 travel each way) and staff/faculty mobility experiences will enhance the global perspectives of both and will create a cohort of students aware of, and able to work in, a global employment market. Students will study abroad for one semester. Six to eight face-to-face consortium meetings are planned during the entire grant period.

Thematic fields covered by the project

Please use the codes indicated in Annex 1. There can be more than one field.

- 0.69 Engineering, Technology (Biosystems Engineering)

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3. ONE PAGE SUMMARY

Title Transatlantic Biosystems Engineering Curriculum and Mobility (TABE.NET)

Duration 1st September 2009 to 31st August 2013

Field Biosystems Engineering. Level undergraduate and taught graduate (cycle 1 and 2)

Biosystems Engineering integrates engineering science and design with applied biological, environmental, chemical, and agricultural sciences to develop and apply engineering solutions to problems in biological systems. Biosystems Engineers are at the forefront of the search for practical solutions to global problems related to clean air and water, sustainable agricultural production, processing of safe foods, safe and healthy environments, climate change impacts and adaptations, minimization of waste, and many other issues at the interface between human desires and environmental resources. Despite its global importance, and because of its relative youth, the discipline of Biosystems Engineering has poor public recognition and lacks internal cohesion. This project will address these important issues.

Objectives. 1 Define the common threads within the discipline of Biosystems Engineering; 2 Globalize core Biosystems Engineering courses by creating a database of multinational examples that can be drawn upon by instructors around the world; 3 Develop innovative courses to advance the continuing development of Biosystems Engineering programs in the US and EU (and globally); 4 Design student and staff/faculty mobility experiences to enhance the global perspectives of both; and 5 Create a cohort of students aware of, and able to work in, a global employment market.

Duration of visits 48 transatlantic student visits of a minimum of 1 semester / term of 4 months equal to 30 ECTS. Minimum of 12 staff / faculty visits of 2 – 3 weeks on average

Languages English, Greek, Spanish and Italian

Summary of outcomes The project will work towards defining common threads of Biosystems Engineering (follow-up of POMSEBES and ERABEE projects); a globally accessible database of multinational examples that are relevant to core Biosystems Engineering courses to ultimately be made available to, and built up by a global base of users; creating a collaborative online (web-based) Biosystems Engineering design project course for students at partner institutions, including those who do not avail of mobility options; creating an online (web based) innovation and entrepreneurship course with multinational examples to prepare graduates for the global employment market; create an online (web based) interactive course – What is Biosystems Engineering? for students at partner institutions, including those who do not avail of mobility options; project reports detailing staff/faculty and student experience from engaging with the program that will provide the substantive basis for the dissemination of the program.

US consortium members Virginia Polytechnic Institute And State University (VT), University Of Illinois (UIUC)

EU consortium members University College Dublin (UCD); Universidad Politécnica de Madrid (UPM); Athens Agricultural University (AUA); University of Bari (UNIBA)

Student mobility 24 EU students and 24 US students studying minimum of 1 semester each

Staff / faculty mobility minimum of 14 staff / Faculty exchanges of average 2 ½ weeks

Track record existing exchange agreements have operated successfully over last 10 years between UCD and VT. More recent exchange agreements also operate between UPM and UIUC and VT. Partners are all members of existing Erasmus and Atlantis projects. Contributing staff / faculty are all internationally recognised academic leaders in Biosystems Engineering education.

4. PROPOSAL NARRATIVE

Project Title: Transatlantic Biosystems Engineering Curriculum and Mobility (TABE.NET)

Consortium Structure

The consortium is comprised of four EU and two US institutions, with personnel from Biosystems Engineering (or similarly named) departments.

Co-directors:

University College Dublin, National University of Ireland Dublin (UCD) (EU lead)

Virginia Polytechnic Institute and State University (Virginia Tech) (VT) (US lead)

Partners:

Agricultural University of Athens (AUA) (EU partner)

Universidad Politécnica de Madrid (UPM) (EU partner)

University of Bari (UNIBA) (EU partner)

University of Illinois at Urbana-Champaign (UIUC) (US partner)

Project Period: September 1, 2009 – August 31, 2013

Introduction

There is global recognition of the importance of sustainable management of air, water, land, food, and other biological resources. All over the world, people are aware of the impacts of global environmental change and non-sustainable use of the earth's resources. There is a need for engineers competent to lead our collective utilization of finite resources.

Biosystems Engineering (BE) integrates engineering science and design with applied biological, environmental, chemical, and agricultural sciences to develop and apply engineering solutions to problems in biological systems. Biosystems Engineers are at the forefront of the search for practical solutions to global problems related to clean air and water, sustainable agricultural production, processing of safe foods, safe and healthy environments, climate change impacts and adaptations, minimization of waste, and many other issues at the interface between human desires and environmental resources.

The overall goal of this project is to advance internationalization of BE curricula and develop a global awareness within the discipline. The academic discipline of Biosystems Engineering has emerged in the past 15-20 years in the US and Europe, as well as in other locations around the world. Most BE programs have evolved from Agricultural Engineering, which focuses on biological systems related to agriculture, while Biosystems Engineering includes a broader array including applications in foods, pharmaceuticals, energy, and environment. Biosystems Engineering is distinct from Biomedical Engineering (also known as Bioengineering), which focuses on medical applications.

While there are commonalities in Biosystems Engineering curricula around the world, there are also differences due to the rate and manner in which programs are developing. Some of the differences in program development have hindered widespread recognition of the field. Members of our consortium recently completed an EU-US Atlantis policy-oriented measures project focused on the evolving BE studies in the US and EU. That project recommended a range of policy-oriented measures. By implementing the recommended measures, the proposed project will address the need for unification and enhanced visibility of the discipline through internationalization of BE curricula. The results of this proposed mobility project could, in turn, lead to joint or dual degrees.

Project Objectives

The overall goal of the project is to advance internationalization of Biosystems Engineering curricula and to develop a global awareness within the discipline. The specific objectives to achieve this goal include the following:

1. Define the common threads within the BE discipline;
2. Globalize core BE courses by creating a database of multinational examples that can be drawn upon by instructors around the world;
3. Develop innovative courses to advance the continuing development of BE programs in the US and EU (and globally);
4. Design student and staff/faculty mobility experiences to enhance the global perspectives of both; and
5. Create a cohort of students aware of, and able to work in, a global employment market.

The project activities related to curriculum development will benefit both staff/faculty and students who avail themselves of the mobility option as well as those who do not.

These objectives build on recently completed and on-going projects focused on BE. The project also takes advantage of the strong collaborations that already exist among the partners.

Past and Ongoing Collaborations among Partners

All partners except UCD were participants in a recently completed EU-US Atlantis policy-oriented project entitled "POMSEBES: Policy Oriented Measures in Support of the Evolving Biosystems Engineering Studies in USA-EU" (<http://www.pomsebes.aua.gr/>). Key findings and recommendations of that project include the following (http://www.pomsebes.aua.gr/Report_on_Proposed_Policy_Measures-v6.pdf):

- BE is "the branch of engineering that prepares students to develop and apply engineering solutions to problems in biological systems."
- The concept that BE emphasizes "integration of life and engineering", including both approaches, "bringing engineering to life" and "bringing life to engineering" should be promoted and disseminated.
- A list of domains, learning outcomes, and core competencies for students in BE should be developed to assist with the evolution and development of the discipline curriculum.
- A systematic comparison among study programs in the US and EU may lead to a standard definition of basics and a clarification of application areas, whereas a common definition of student course load should be developed to make EU and US BE curricula compatible;
- Relationships between quality assurance issues of programs of study and learning outcomes or student's core competences should be encouraged. Accreditation processes for engineering degree programs in the EU and US provide a framework for establishing such a relationship.
- Publication of a database showing competencies of Biosystems Engineers and conversion tables of credits and grades between EU and US programs would enhance the mobility of EU and US BE graduates within global industry.

The proposed curriculum development and mobility project is designed to address many of the recommendations of the POMSEBES project. Because most of the current partners were involved in developing the recommendations, the project team already has momentum as we move forward to advance the BE curriculum and profession.

All EU partners have been involved in two EU funded Thematic Networks related to Agricultural Engineering (USAEE) and Biosystems Engineering (ERABEE). The major objectives of the current thematic network ERABEE are to:

1. Promote the critical transition from the traditional discipline of Agricultural Engineering to the emerging discipline of BE;
2. Exploit along this direction the outcomes accomplished by the USAEE-TN (EU funded predecessor);
3. Promote synergies between Education and Research: Promote a structured 3rd cycle programs of studies, also establishing linkage between education and research at all three cycles;
4. Enhance the compatibility among the new programs of BE in EU, aiding their recognition and accreditation at European and international level; and
5. Facilitate greater mobility of skilled personnel, researchers and students in the broader field of BE.

The six partners for this Excellence in Mobility project have signed a Memorandum of Understanding (MOU) agreeing to encourage the development of student and staff/faculty exchange and curriculum development in the subject area of BE. The MOU represents a commitment from the institutions and provides the framework for developing specific Exchange Agreements for the EU-US Atlantis Excellence in Mobility project. Those Exchange Agreements will be finalized within the first four months of the project, allowing the first students to begin traveling by January 2010. Exchange agreements already in place between some of the partners will form the basis of the additional agreements.

The lead US and EU institutions, Virginia Tech (VT) and University College Dublin (UCD), respectively, have had a student exchange program in place since 2000. Through the exchange between VT Biological Systems Engineering and UCD Biosystems Engineering, 19 students (10 from VT, 9 from UCD) have participated in the exchange since it began 10 years ago. Most of the students have participated in a full academic year abroad; 3 have been abroad for a single semester.

Both US partners have exchange programs with UPM. In the past two years, UIUC and UPM have initiated a formal engineering student exchange program. To date, six U.S. students have studied at UPM and one UPM student at UIUC.

The EU partners AUA and UPM have Socrates-Erasmus agreements with each other.

Project Outcomes

Project outcomes will include both tangible products and more globally aware and educated students and staff/faculty. Some of the tangible products that will improve teaching and student learning include the following:

1. Common threads of BE (as a follow-up of POMSEBES and in synergy with ERABEE projects);
2. A globally accessible database of multinational examples that are relevant to core BE courses;
3. Collaborative online (web-based) design project course for students at partner institutions who are not traveling;
4. Online (web based) innovation and entrepreneurship course with multinational examples;
5. Online (web based) interactive course – What is Biosystems Engineering?
6. Project reports detailing staff/faculty and student experiences from engaging with the program. These will provide the substantive basis of the dissemination of the program.

Curriculum Development Activities

The emphasis of curriculum development activities will be to produce resources that can be implemented in a variety of ways by BE programs around the world. The outcomes of the project will be available for other programs to select from, based on their own emphases and constraints. Materials will be developed in English, with abstracts translated into the languages of the partners.

Curriculum development activities will involve all of the partners and will take place in a variety of formats, including face-to-face meetings, staff/faculty mobility, and virtual networking. There are a variety of platforms that can be used for virtual networking. For example, the platform most commonly used at UPM is MOODLE. To facilitate virtual networking, we will select a platform that fits all partners during the first four months of the project. Each partner will also develop live streaming and archiving of lecture material for use in curriculum development and language training (see language plan). For example, UCD will utilize the Irish government funded HEAnet media services for this activity.

Common Threads of the Biosystems Engineering Discipline

The core concepts, or threads, of BE are variously understood by those within the discipline, but have never been unequivocally defined due to the comparative youth of the discipline. This makes communication and teaching difficult compared to other well established engineering subjects. The Atlantis POMSEBES project and Erasmus Network "ERABEE" have worked towards defining core curriculum for the discipline, but this needs to be taken further by defining the threads that link courses together. These may include concepts such as defining biological constraints; sustainability assessment; biological thermodynamics and systems analysis. Once defined, these threads will be available for global development of the BE discipline.

Database of Multinational Examples for Core Courses

While the BE curriculum is built on a foundation of mathematics, science and engineering science, as are all engineering disciplines, key courses for biosystems engineers include:

- *Biology for engineers*, including specific consideration of: (i) plants; (ii) animals; (iii) microbiology; and (iv) molecular biology
- *Thermodynamics of biological systems*
- *Unit operations in biological systems*, including specific consideration of biological, chemical and physical processes
- *Fundamentals of sustainable environmental engineering*
- *Innovation: sustaining biological resources utilization*

Including multinational examples in these courses would increase the global relevance of the courses and enhance the learning experience of the students. After we design the database structure, we will develop a format for describing a multinational example. We will then solicit examples from staff/faculty of our partner departments; the examples will be submitted in the given format. We will then enter the examples into the database which will be made accessible through the project website. Of particular interest are examples that illustrate the variability and similarity of global issues with respect to geography, climate, political system, culture, and other characteristics. Examples might include:

- Environmental transport, e.g. pollutant transfer in desert, Mediterranean, humid temperate and frozen environments
- Applications of fermentation processes, e.g. beverage production, biofuels and food safety
- Food safety processes and procedures, e.g. standards and processes for maintaining food chain integrity
- Bioenergy: production, conversion, environmental impact
- Biosensors and/or bioinstrumentation to assess biological processes including plant and crop health, and animal health and welfare.

Collaborative Online (web-based) Design Project Course

Design and teamwork are fundamental engineering skills that have to be developed by all professionals. We will develop a web-based course built around a simple design task. Students enrolled in the partners' programs will be eligible to enrol in the course. The course coordinator will compile international teams to work on the design problem using eTutors/eMentors to support the teams and provide structured learning support materials. The course will be based on the UCD course BSEN10010 *Biosystems Engineering Design Challenge* (found by following links at http://www.ucd.ie/students/course_search.htm).

Online (web based) Innovation and Entrepreneurship Course

Recent international developments are driving universities to move beyond teaching and research and extension into the realms of innovation and job creation. It is incumbent on BE as a discipline to provide training in innovation and entrepreneurship. A web-based module will be developed using resources from UCD Nova (see example material at <http://www.ucd.ie/nova/podcasts/>) and other partner institutes addressing issues such as business plans, intellectual property, marketing finances and law. Core curriculum will be supplemented by localization and examples drawn from BE and existing entrepreneurship courses (e.g. engineering.illinois.edu/news/index.php?xld=071509120742).

Course Development: What is Biosystems Engineering?

We will develop a BE seminar course for all partners, focusing on key global issues about which biosystems engineers have expertise, specifically, water, air, biological resources, energy, and food. The goal will be to introduce BE students to these global

issues, including the role of biosystems engineers in addressing problems in these areas. Seminar materials will be developed and contributed by all partners. A blended learning approach will be used, including common lectures (seminar presentations) on-line and local tutorials. The common lectures will use a “web meeting” format so that groups from all institutions can participate simultaneously. The local tutorials or courses (with internationally developed support materials) and field trips, as appropriate, will provide smaller group interactions. Students will complete collaborative team projects, with teammates from different universities. The projects will focus on the key global issues addressed in the course. The target student will be a mid-level undergraduate, for example a sophomore or junior in the US and in the 3rd year of level 1 or 1st year of level two in EU. The implementation of this course will also serve as a recruiting tool on each campus for the planned student exchanges.

In addition to the curriculum development activities described above, the European partners may develop a series of annual intensive programmes open to all partner institutions (seeking funding under the Erasmus Intensive Programme calls; this activity depends on available parallel funding) to focus on key issues such as biometrics, biofuels, bio-based materials, and bioprocessing. A second possibility that we will aggressively pursue is to secure alternate funding for US students to go on short-term visits during May-July in which student teams will be assigned a specific engineering problem and work with fellow students at a partner EU institution. This also could serve as both a recruiting tool and as a means for screening students in the selection process for semester-long exchange.

Added Value for the Biosystems Engineering Discipline and Profession

The project will contribute to educational excellence and global awareness in BE through the collaborative development and dissemination of curricular materials with a multinational focus. Innovative approaches will be used in the development and delivery of the courses.

The project will provide participants the opportunity to acquire more than just a technical BE education. Using both mobility and home programs, participants will have opportunities to develop their professional skills in an international context, including written and oral presentation, social skills, interactive communications, personal and team management, and cultural awareness. The combination of technical and professional skills will enhance the mobility of graduates in the global marketplace.

The mobility project will greatly enhance the on-going VT-UCD, VT-UPM, and UIUC-UPM exchanges. With more partners involved, there will be a greater pool of students from which to recruit and the students will have more choices of institutions on both sides of the Atlantic. The broader choice of institutions (including multiple European languages) will expand the opportunity for the US students. Another significant expansion will be the involvement of faculty in curriculum development that will benefit all partners of the project, including students who participate in the exchange as well as those who do not.

Integration of the Mobility Program among the Consortia Institutions

Academic Credits

Credit and grade equivalencies will be defined in the exchange agreements that will be executed within the first four months of the project. The project will make use of the European Credit Transfer System (ECTS) and Diploma Supplement councilors (http://ec.europa.eu/education/lifelong-learning-policy/doc48_en.htm) available in Italy, Ireland, and Greece (<http://ec.europa.eu/education/lifelong-learning-policy/doc/ectscouns.pdf>) to assist with the development of the highest possible standard of credit transfer for the partnership. In Spain, both ECTS and Diploma Supplement are mandatory by Royal Decree.

The existing agreements among partners provides a strong basis for moving quickly to finalize the exchange agreements. For example, course equivalencies, credit transfers, and grading equivalencies are being established by UIUC and UPM. For the ongoing UCD-VT exchange, evaluation of course materials has shown that 5 ECTS credits at UCD is equivalent to 3 semester credit hours at VT.

Each partner institution has policies in place for transfer of credits from another institution. For example, at VT and UCD, credits transfer from study abroad, but grades do not. At VT, to receive transfer credit, undergraduate students must receive the equivalent of a final grade of C or better, and graduate students must receive the equivalent of a final grade of B or better. UCD is in transition to a system of full GPA transfer in situations where full equivalency can be determined, which should come into effect during the life of this project. At AUA, ECTS credits are only awarded for courses that are part of the approved study program. At UPM, US exchange students are provided with a Diploma supplement, with information on the courses, ECTS, and the grades in the Spanish system (numerical from 0 to 10, passing the course with 5 or more).

The Cooperative Mechanisms and Administrative Structure for Institutionalization, Meetings, Roles for Partners, and Communications

The student mobility activities of the project will be part of the already established mechanisms and structures at each partner institution for student exchanges. All partners have such offices and experience; we will take advantage of the expertise already in place for institutionalizing the exchange.

The project partners will meet both face-to-face and virtually throughout the project period. Face-to-face meetings will occur in conjunction with the annual Atlantis meetings and with several of the ERABEE Workshop meetings, which generally take place every

six months. Quarterly conference calls of the project partners will be conducted using technology such as Skype. Such calls have been very beneficial in developing this proposal.

Communications will also be facilitated by a project website. All project activities will be documented there. VT and UCD will manage site content and UCD will host the site. All partners will include links to the site from their own websites. The website will be helpful in student recruitment, dissemination of project outputs, and communication among partners and with others outside of the project.

The roles of the partners are defined as follows:

UCD and VT: co-direct the project; coordinate activities among partners; oversee all aspects of the project; coordinate project meetings and conference calls; keep partners informed of activities; facilitate student selection; coordinate project evaluation; prepare annual reports; manage project website content; management of dissemination of outputs; and

Each partner: recruit students; host students, contribute to curriculum development activities, including providing materials, faculty leadership, and faculty time; provide faculty who will participate in mobility trips for curriculum development and related activities.

Tuition and Fees

Students will pay compulsory costs of their education in accordance with the regulations of their home institutions. At VT and UIUC, this includes tuition and fees. At UCD and UNIBA, this includes fees and a student levy while additional services fees (e.g. aspects of sports centre services) are on a pay by use basis. At AUA, studies are free of tuition or fees.

Reduced student tuition and fees are possible for UIUC College of Engineering students engaged in semester or longer study abroad, as part of the strategic plan to increase international experiences. During the 2008-09 academic year, for example, the tuition charge was roughly 20% of in-state tuition, and most other student fees were waived.

Mechanisms for Student Mobility between Hosting Institutions

Student Recruitment

Students will be recruited at all partner institutions during the 1st or 2nd year of their studies regardless of whether they are on a 4, 4+1 or 3+2 year programme. Recruitment will start early to ensure that students have enough time to develop appropriate cultural and language proficiency before their mobility visit. A variety of recruiting approaches will be used, including information on each partner's website, promoting the exchange directly in BE and general engineering courses (depending on the individual campus scenarios). Advertising to a wider engineering student audience at each home institution could be part of promoting the BE program and perhaps recruiting students to the program as well as to the exchange project.

Student Selection

A student selection committee, comprised of one representative from each partner institution, will be co-chaired by the project co-directors, Wolfe (US) and Holden (EU). The committee will be responsible for reviewing student applications and selecting the students to participate each year. A common application process will be used by all partners. Each partner will define a minimum standard for hosting an incoming student (e.g., grade point average); the minimum standards will be documented in the exchange agreements. In all cases, students applying for exchange must be in good academic standing at their home institution. In addition, we will establish other selection criteria prior to designing the application form. For example, the application to study in the US will be completed in English. In all cases, some level of proficiency in the language of the host institution and/or a definitive plan to acquire that proficiency will be required. Students will apply to go to hosts in rank order. The committee will review the applications and allocate each application to a host institution, ensuring a balance of incoming and outgoing students for each partner over the duration of the project. The student will then apply to the host institution; since the selection committee will have considered the host institution's standards before the student is told to apply there, rejection of an applicant by a host institution should be rare, if at all.

To ensure time for any needed language instruction, students will be required to apply one year before their intended study abroad semester (students can also choose to go for a full academic year, with no additional funds provided for the additional term). Applications will be due in February for the following academic year.

Logistical Support for Students

Each of the partners has an office in place that provides logistical support for students. For example, at VT, the Education Abroad office (<http://www.educationabroad.vt.edu>) serves as the primary coordinating unit for most logistical issues for both outgoing and incoming students. The UIUC Study Abroad Office (<http://www.cte.uiuc.edu/dme/placement/student/otherFL.htm>) provides administrative support, assistance, and advice for travel health, safety, and insurance. The International Office at UCD (<http://www.ucd.ie/international/>), the Department of International and Public Relations at AUA, and the International Office at UNIBA (www.dardre.uniba.it) provide logistical, welfare and social support services for incoming and outgoing students.

Language Plan

Each student participating in a mobility exchange will acquire an appropriate proficiency in the language of the home institution. Students will be required to take appropriate language courses at their home institution prior to the exchange. In addition, while at the home institution, students will listen to archived lectures from BE courses from the host institution; these lectures will be

streamed and archived by the partners. Listening to technical lectures in the host language will contribute to the student developing language proficiency.

At UIUC, language training is available through the College of Engineering's newly established spring semester intensive language course, beginning 2009, and through an intensive Language Instruction Program offered to students and faculty each winter break. Greek language training is available for graduate students through Foreign Language and Area Studies fellowships administered by the Center for Global Studies. The VT Department of Foreign Languages and Literatures teaches courses that are appropriate for students who are preparing for a study abroad program. Among other languages, the department offers instruction in modern Greek, Italian, and Spanish. All of the EU partners provide training in English.

While participating in the exchange at the host institution, each student will be required to continue to study the host language. Both formal and informal language study will be encouraged. At AUA, Greek language courses are offered free of charge on a regular basis at beginners level. There is also the possibility of studying Greek language at National University of Athens (Faculty of Philosophy). At UNIBA, advanced knowledge of the Italian language is not required for foreign students since an Italian language course is provided each semester. The course consists of 100 hours and is organized in three levels: base, intermediate and advanced. UPM provides Spanish courses for foreign students; there are specific courses with emphasis on technical and scientific language. There are also on-line courses. The students must have sufficient knowledge of the Spanish language although some courses could be in English. As described in the evaluation plan, students' language proficiency will be assessed before and after the exchange.

The admissions language requirements of the US institutions are as follow:

At UIUC, exchange students will enroll through either the College of Engineering or the College of Agriculture, Consumer and Environmental Sciences and these Colleges reserve the ability to waive or alter the following requirements according to faculty advice and international consortia agreements. English language proficiency must be demonstrated by one of the following: (1) A score of at least 550 (agriculture) or 600 (engineering) on the paper-based (pbt) Test of English as a Foreign Language (TOEFL), 213 (agriculture) or 250 (engineering) on the computer-based test (cbt), or 79 (agriculture) or 100 (engineering) on the internet-based test (ibt); (2) An SAT I critical reading score of at least 560, or an ACT English score of at least 25; (3) Completion of two academic years of full-time study immediately prior to the proposed date of enrollment in a country where English is the primary language; or (4) Minimum 6.5 total score on IELTS with minimum subscore of 6 on all four modules.

At VT, students whose native language is not English must have TOEFL scores of at least 80, with no section sub-score less than 16, on the Internet-based test. For the computer-based test, scores must be at least 207, and for the paper-based test, scores must be at least 550.

Cultural Preparation

Students will be prepared culturally before the exchange through the following activities.

- Review of materials on culture and society. Each partner, in conjunction with local experts will compile lists of books commonly found in University libraries, websites and reports/pamphlets available for distribution to all partners that will cover introductions to history, society, political system, cultural conventions, academic systems, and principles of law;
- Engaging in international group activities organized by the project. Participants that have applied for mobility support from the project will be integrated into project groups and activities of the host institution, thus developing firsthand experience of social integration and cultural norms; and
- Being linked to relevant student societies on campus.

On arrival, visiting students can attend informal cultural orientation events (e.g. organized by the UCD International Office), make personal contact with student societies and enroll for cultural and language modules available under the UCD Horizons modules curriculum system.

Resources Available for Hosting Foreign Students and Faculty

Each partner institution has an office that provides support services, including educational, cultural, and social activities, for visiting students, i.e., the UCD International office (www.ucd.ie/international), the International Office at UNIBA (www.dardre.uniba.it), UPM (<http://www2.upm.es/portal/site/internacional/menuitem.46c79e9d35e5079f6db24610dff46a8/?vgnextoid=5c5e53ca8c2ed110VgnVCM10000009c7648aRCRD>), the AUA European programs' office, Cranwell International Center at VT (<http://www.uusa.vt.edu/cranwell/cranwell.php>). Each of these offices provides services such as the following:

- Arrival orientation events at the start of each semester including: onsite reception, assistance with registration, free social events (films, concerts, walking tours, trips), college specific orientation, general introduction to university and introduction to local culture;
- An International Student's Handbook with all necessary information ranging from legal requirements of immigration and registration to dealing with the university system to obtaining necessary services and support such as health and welfare;
- Assistance with finding student accommodation; and
- A checklist to ensure all necessary activity has been undertaken prior to the study phase of the visit.

UPM has some cultural activities prepared for visitors (<http://www2.upm.es/portal/site/internacional/menuitem.199c9f549df126db8daf8968907c46a8/?vgnextoid=b6af6846c53f110VgnVCM10000009c7648aRCRD>). UIUC has excellent student support and services for international education. ACES has a strong interest

and history of international programs, with a Global Connect International Programs (<http://global.aces.uiuc.edu/>), ACES Academy for Global Engagement, and ACES Study Abroad (http://students.aces.uiuc.edu/study_abroad).

Mechanisms for Staff/Faculty Mobility between Hosting Institutions

Staff/faculty mobility will include the following:

- short, intensive courses delivered by faculty with expertise not replicated in the host (e.g., food integrity). The partners will identify potential topics and experts early in the project and then schedule the mobility trips over the period of the project.
- course development visits as part of general curriculum development
- definition of threads visits to engage in host-centre discussions / workshops with staff / faculty, graduate students and undergraduate students on the common threads of BE
- dissemination visits to promote the activities of the project at host-centres and neighbouring institutions
- localisation of the materials provided in the database of international examples
- short-term research interaction (in conjunction with at least one of the above).

The interaction of host and home staff/faculty will strengthen all programs.

Evaluation Plan

The independent evaluator for this project will be Dr. Michael J. Delwiche, Professor and Chair, Department of Biological and Agricultural Engineering, University of California, Davis. His brief CV and letter of commitment are included in the appended materials. Dr. Delwiche has professional experience in Europe, having spent a sabbatical year at a Belgian university (KU-Leuven), and the department he chairs is regarded as one of the best in biosystems engineering. He will participate in at least two face-to-face consortium meeting during the project period and visit at least one EU partner and one US partner during the project period. An evaluation report will be submitted annually.

A variety of qualitative and quantitative indicators will be used to measure the success of the project. The measures by which the U.S. Department of Education assesses the FIPSE program include (1) the percentage of FIPSE grantees who report project dissemination to others; and (2) the percentage of FIPSE projects that report institutionalization on their home campuses. With regard to the first measure, we will document project dissemination. At the beginning of each year, we will set goals for dissemination, e.g., presentations, papers, etc. At the end of each year, we will assess if we met our goals for dissemination and then set our goals accordingly for the next year. An important measure of success of our project will be the level of adoption of the materials developed through the project, particularly courses and the examples database. We will survey programs outside the consortium in the 3rd and 4th years of the project to determine the level of adoption of materials.

For measure (2), we will assess institutionalization on our home campuses with respect to percent of staff/faculty using curricular materials from the project, the number of staff/faculty participating in mobility experiences, the level of global awareness among our students. We will administer surveys to all of the students about global awareness and assess the impact of the study abroad experience compared to those who do not study abroad. We will conduct the survey early in the project at all of the partner institutions to set a baseline and then survey over time. Pre- and post-participation surveys will be developed and administered to students who participate in the mobility experience. The surveys will address a variety of topics including language skills, global awareness with respect to professional, cultural, and societal issues.

Formative evaluation will include providing feedback to students before, during, and after their mobility experience. We will develop some "checksheets" to see how students are doing with respect to academics, socializing, language proficiency, and other aspects of the exchange.

Further details of the evaluation plan and the assessment instruments will be finalized in the first four months of the project (before the first students go abroad in spring 2010). For example, we will develop assessment measures for the curricular development activities.

Dissemination of Project Results

Dissemination of the results of the project will take place through a number of avenues. One major focus area will be the broader BE educational system, including institutions in Europe and the U.S. and globally. Project outcomes will be disseminated via publications, presentations, and the project website. One avenue of dissemination will be through ERABEE-TN which has established a strong synergy with EurAgEng (European Society of Agricultural Engineers) through Vice President and Representative of the Thematic Network Prof. P. Febo who leads both EurAgEng Working Group 'Education & Communication' and CIGR Working Group 'Agricultural Engineering University Curricula Harmonization'.

A second avenue will be through the American Society of Agricultural and Biological Engineers (ASABE). The Head of the UCD School of Agriculture, Food Science and Veterinary Medicine (home of UCD Biosystems Engineering) is a member of the Department Heads group (ED-210) of ASABE. This group will also be used as a dissemination route for the project. The department heads at UIUC and VT are current members and co-PD Gates is a past member of ED-210. ASABE Board of Trustees strategic initiatives in 2008-09 include internationalization of the Society's membership and a push to bring more international engagement in peer-reviewed publications and in engineering standards activities (co-PD Gates is a trustee).

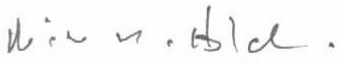
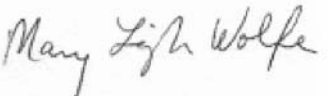
Project Sustainability

The strong collaborations enhanced through this project will set the foundation for sustainability. Once the tradition of student exchanges among the partners is established and known among students, the exchanges are likely to continue. The stipends provided through the project will provide incentive to participate; however, once a program is well established, those incentives are less likely to be needed. At the same time, we will pursue other funding options, such as foundations and multi-national companies that might show interest in financing future student exchanges to develop work on specific subjects of their particular interest.

The curricular materials developed in this project will remain available beyond the project period.

The multi-institutional, multi-staff/faculty curriculum development activities will likewise build strong ties. It is anticipated that groups of staff/faculty will pursue other sources of funding to continue curriculum related work.

This is to certify that this proposal narrative is identical to that submitted to FIPSE

Name, Function & Signature of the EU Project Leader/Coordinator	Name, Function & Signature of the US Project Leader/Coordinator
<p><i>NAME</i> Nicholas M. Holden</p> <p><i>FUNCTION</i> Head of Biosystems Engineering, Director, UCD Bioresources Research Centre Deputy Director, UCD Life Sciences Graduate School</p> <p><i>SIGNATURE</i></p> 	<p><i>NAME</i> Mary Leigh Wolfe</p> <p><i>FUNCTION</i> Assistant Department Head for Teaching Biological Systems Engineering, VT</p> <p><i>SIGNATURE</i></p> 
Date	Date
18 th March 2009	18 th March 2009

5. PARTNER IDENTIFICATION FORMS

5.1. EU lead institution: (signatory of contract)

To fill in this part, please use the type of institution codes indicated in Annex I. Please complete the appropriate form to show the legal status of the EU Lead institution (annex IV). Specific forms by type of status can be found on the same web-address with the application forms.

5.1.1. Legal Representative

Full legal name of the institution in the national language	University College Dublin, National University of Ireland Dublin		
Acronym of the institution, if applicable	UCD		
Full name of the Institution in English (formal or informal translation)	n/a		
Type of institution code	EDU.4	Erasmus ID code, for Higher Education Institutions only, If applicable	IRL DUBLIN02
Internet Homepage	www.ucd.ie		
Legal representative of the institution, who is authorised to sign the agreement: Last name First name	Brady Hugh	Title (optional) (e.g. Prof., Dr, etc.)	Dr
Department/Unit	Office of the President		
Official function within the institution	President of UCD	Sex	M
Legal address of the institution Street & Street Number Post code & town / Country	University College Dublin Belfield, Dublin 4 Ireland		
Phone (including country and area code)	+353 / 1 / 7161666		
Fax (including country and area code)	+353 / 1 / 7161170		
E-mail	president@ucd.ie		

5.1.2 Coordinator (responsible for EU Institutions' co-ordination)

The address provided will be used for the acknowledgement of receipt and all further correspondence relating to the project .

Coordinator: Last name First name	Holden Nicholas	Title (optional) (e.g. Prof., Dr, etc.)	Prof
Department/Unit	UCD School of Agriculture, Food Science and Veterinary Medicine		
Official function within the institution	Head of Biosystems Engineering Director, UCD Bioresources Research Centre Deputy Director, UCD Life Sciences Graduate School	Sex	M
Complete Correspondence address Street Post code & town Country & region	Bioresources Research Centre / Biosystems Engineering UCD School of Agriculture, Food Science and Veterinary Medicine Room 3.03, Agriculture and Food Science Centre University College Dublin Belfield, Dublin 4 IRELAND		
Phone (including country and area codes)	+353 / 1 / 7167460		
Fax (including country and area codes)	+353 / 1 / 7167415		
E-mail address	Nick.Holden@ucd.ie		

5.1.3 Person in charge of finance

Last name First name	Kelly David	Title(optional) (e.g. Prof., Dr, etc.)	Mr
Department/Unit	College of Life Sciences		
Official function within the institution	Director of Financial Planning and Strategy	Sex	M
<u>Correspondence</u> address Street Post code & town Country & region	College of Life Sciences Science Centre University College Dublin Belfield, Dublin 4 IRELAND		
Phone (including country and area codes)	+353 / 1 / 7162635		
Fax (including country and area codes)	+353 / 1 / 7162685		
E-mail address	David.Kelly@ucd.ie		

5.1.4 Financial identification

Please complete the appropriate financial form (annex III) as a function of the nationality of the EU-lead institution and attach the duly signed original to your application. The form has to be signed and stamped by the bank representative.. Specific forms by country can be found on the same web-address with the application forms.

5.2. EU partner institutions

For EU partners, please use the type of institution codes indicated in Annex I.

Check the minimum number of partners required (see *Guidelines for Applicants*).

Add copies for additional partners if necessary.

- Partner Nr 2

Full legal name of the institution in the national language	Γεωπονικό Πανεπιστήμιο Αθηνών		
Acronym of the institution, if applicable	AUA		
Full name of the Institution	Agricultural University of Athens		
Department/Unit	Division of Farm Structures & Farm Machinery, Laboratory of Farm Structures		
Type of institution	EDU.4	Country code	GR
Contact person Last name First name	Briassoulis Demetres	Function: Professor	M
Legal address of the institution Street & Street Number Post code & town Country	Agricultural University of Athens Division of Farm Structures & Farm Machinery, Laboratory of Farm Structures 75, Iera Odos Str., 11855, Athens, Greece		
Phone (including country and area code)	+30 / 210 / 5294011		
Fax	+30 / 210 / 5294023		
E-mail	briassou@aua.gr		
Homepage	www.aua.gr		

- Partner Nr 3

Full legal name of the institution in the national language	Universidad Politécnica de Madrid		
Acronym of the institution, if applicable	UPM		
Full name of the Institution	Madrid Polytechnic University		
Department/Unit	Buildings, Infrastructures and Projects for Rural and Environmental Engineering		
Type of institution	EDU.4	Country code	ES
Contact person Last name First name	Ayuga Francisco		Function: Professor M
Legal address of the institution Street & Street Number Post code & town Country	ETSI Agrónomos, Ciudad Universitaria s/n 28040 Madrid Spain		
Phone (including country and area code)	+34 / 91 / 3365625		
Fax	+34 / 91 / 3365625		
E-mail	francisco.ayuga@upm.es		
Homepage	www.etsia.upm.es		

- Partner Nr 4

Full legal name of the institution in the national language	Università di Bari		
Acronym of the institution, if applicable	UNIBA		
Full name of the Institution	University of Bari		
Department/Unit	Department of Engineering and Management of the Agricultural, Livestock and Forest Systems		
Type of institution	EDU.4	Country code	IT
Contact person Last name First name	Scarascia-Mugnozza Giacomo		Function: Professor M
Legal address of the institution Street & Street Number Post code & town Country	via Amendola 165/a 70126 Bari Italy		
Phone (including country and area code)	+39 / 080 / 5442966		
Fax	+39 / 080 / 5442977		
E-mail	scarasci@agr.uniba.it		
Homepage	www.uniba.it		

5.3. US institutions:

5.3.1. US lead institution

- Authorising official

Full legal name of the institution in the national language	Virginia Polytechnic Institute And State University
Acronym of the institution, if applicable	VT
Type of institution	EDU.4
Institutional homepage	www.vt.edu
Authorising official of the institution: Last name First name	Bucy Linda
Department/Office	Office of Sponsored Research
Title	Assistant Vice President for OSP Administration
Legal address of the institution Number & Street City/Province/ Zip code	1880 Pratt Drive, Suite 2006 Blacksburg, VA 24060 USA
Phone (including area code)	+1 /540 / 2312068
Fax (including area code)	+1 / 540 / 231
E-mail	blovell@vt.edu

- Project coordinator

The address provided will be used for the acknowledgement of receipt and all further correspondence relating to the project.

Project coordinator: Last name First name	Wolfe Mary Leigh
Department/Office	Biological Systems Engineering
Title (optional) (e.g. Prof., Dr, etc.)	Dr
Correspondence address Number & Street City/Province/ Zip code	305 Seitz Hall Virginia Tech, Blacksburg, VA 24061 USA
Phone (including area code)	+1 / 540 / 2316092
Fax (including area code)	+1 / 540 / 2313199
E-mail address	mlwolfe@vt.edu

5.3.2. US partner institutions

- Partner Nr 2

Contact person	
Last name	Gates
First name	Richard Function: Professor
Full legal name of the institution	University of Illinois
Acronym of the institution, if applicable	UIUC
Department/Office	Agricultural and Biological Engineering
Type of institution	EDU.4
Legal address of the institution Number & Street City/Province/Zip code	Agricultural Engineering Sciences Building 360C AESB, MC-644 1304 W. Pennsylvania Avenue Urbana, IL 61801 USA
Phone (including area code)	+1 / 217 / 2442791
Fax (including area code)	+1 / 217 / 2440323
E-mail	rsgates@illinois.edu
Homepage	illinois.edu

6. PERSONNEL INFORMATION

You should clearly outline the qualifications of all key personnel related to the project. You can include in an appendix brief bios (one page), highlighting relevant skills and experience of the personnel. If you include resumes instead of the bios, strictly limit each to two pages.

Name	Nicholas M. Holden	Role	European coordinator; UCD leader
Institution	UCD		
Key experience and skills	Head of Subject, Biosystems Engineering; Director, UCD Bioresources Research Centre; Deputy Director, UCD Life Science Graduate School; leader for BE Biosystems Engineering Accreditation and BAgrSc Engineering Technology ASABE recognition; over 10 years of curriculum and programme development in engineering and agriculture; FP6 project coordinator; extensive research management and project financial management		
URL	http://www.ucd.ie/agfoodvet/Staff/nick_holden.htm		

Name	Mary Leigh Wolfe	Role	Project Leader; US coordinator; VTech leader
Institution	VT		
Key experience and skills	Assistant Department Head for Teaching; Chair Engineering Accreditation Commission of ABET, Inc; over 20 years of curriculum and program development in engineering;		
URL	http://www.bse.vt.edu/08/dept/bio.php?person=mlwolfe		

Name	Richard S. Gates	Role	Illinois leader
Institution	University of Illinois		
Key experience and skills	Professor at the University of Illinois, Department of Agricultural and Biological Engineering. Previously spent 23 years at the University of Kentucky, as Assistant, Associate and full Professor, as well as Chair of the Department of Biosystems and Agricultural Engineering. International experiences include leading a 26-student study group to France (Dijon), overseas sabbaticals in South Africa (University of Natal), Greece (Agricultural University of Athens) and Japan (Kitasato University), and engineering work for six months at Technion University, Haifa Israel. Past leader on a U.S.-Brazil Consortium between the University of Kentucky, Iowa State University, Federal Universities of Viçosa, Campina Grande, Lavras and the University of São Paulo-Piracicaba. On the board for Section II of the CIGR (International Agricultural Engineering Commission).		
URL	http://abe.illinois.edu/faculty/R_Gates		

Name	Demetres Briassoulis	Role	AUA leader
Institution	AUA		
Key experience and skills	Departmental EU Erasmus Coordinator, over 20 years of experience in Agricultural and Biosystems Engineering education; curriculum and program development in engineering and agriculture; FP6 and FP7 project coordinator; research management; project financial management. Coordinator of two EU Thematic Networks (USAEE, ERABEE) related to Agricultural and Biosystems Engineering curriculum development and one EU-FIPSE Thematic Network (POMSEBES) concerning Policy Oriented Measures towards developing a uniform framework for compatible programs of Biosystems Engineering in EU and US		
URL	n/a		

Name	Francisco Ayuga	Role	UPM leader
Institution	MPU		
Key experience and skills	PhD in Agricultural Engineer, 25 years teaching as Assistant P., Associate P. and Professor. Head of the research group BIPREE, former vice-president of the Spanish Society of Agro-Engineering. Expertise on Rural Buildings and Infrastructures (Silos, Rural Roads, Animal houses etc.)		
URL	http://www.etsia.upm.es/gruposinv/eipirma/Web%20personal/francisco%20ayuga.htm		

Name	Giacomo Scarascia-Mugnozza	Role	UNIBA leader
Institution	UNIBA		
Key experience and skills	Full professor in Rural Structures at the Faculty of Agriculture of the University of Bari; Director of Department of Engineering and Management of the Agricultural, Livestock and Forest Systems; Academic Co-ordinator of the Lifelong Learning programme Erasmus for the Bilateral agreement with The University of Athens (GR), University of Wageningen (NL) and the University of Valencia (SP); project coordinator; research management.		
URL	http://www.uniba.it/ricerca/dipartimenti/progettazioneagrozoa/Risorse%20e%20strutture/personale-1/Docenti/Giacomo%20Scarascia%20Mugnozza%20-%20English%20version/?searchterm=Giacomo%20Scarascia-Mugnozza		

7. BUDGET

Duration and languages

The contractual period is likely to start on 1st September 2009. The duration of the consortia project is 48 months.

For EU partners only, language in which you would like the grant contract to be issued	
1st preference <input type="checkbox"/> DE <input checked="" type="checkbox"/> EN <input type="checkbox"/> FR	2nd preference <input type="checkbox"/> DE <input type="checkbox"/> EN <input type="checkbox"/> FR
For EU partners only, language in which you would like correspondence with the Executive Agency to be conducted <i>(to facilitate cooperation with your partners, you are advised to enter the language most commonly used for communication within the partnership)</i>	
1st preference <input type="checkbox"/> DE <input checked="" type="checkbox"/> EN <input type="checkbox"/> FR	2nd preference <input type="checkbox"/> DE <input type="checkbox"/> EN <input type="checkbox"/> FR

Financial support from USA/European Community

Has the proposal, or any aspect thereof or any larger project / network to which it may belong, already been supported in the past by the US or the European Community?

No

Yes. Please specify the programme, date, type of activity (e.g. preparatory visit) and, if possible, contract number(s):

Is this proposal, or any aspect thereof or any larger project/network to which it may belong, currently being supported under any other American or European Community programme?

No

Yes. Please specify the programme, date, type of activity (e.g. preparatory visit) and, if possible, contract numbers:

Is this proposal, or any aspect thereof or any larger project/network to which it may belong, currently the subject of any other application for support from the US or the European Community?

No

Yes. Please specify the programme(s) and provide details under section 2 Table 2.

General instructions

- Before completing this section, please read carefully the “Explanatory note on Budget” in Annex 2.
- The budget should cover the entire period of the grant.
 - The budget should be coherent with the work plan.
- All amounts should be provided in Euros.
- Please adhere strictly to the format provided in the tables, and check carefully the figures provided (applications containing calculation errors will be penalised in the selection process).

Table 1 : Total grant requested from the European Community

Categories of funding	Amounts in EUR
1. Flat-rate sum for administrative costs	30.000
2. Transatlantic student mobility grants	120.000
3. Transatlantic faculty mobility grants	30.000
TOTAL (identical to the total in Table 2)	180.000

U.S. Department of Education Budget Summary

*** 1. Program**

EU-U.S. Program

*** 2. Select One:**

Lead (fiscal agent) Partner

*** 3. Name of the Institution/Organization:**

Virginia Polytechnic Institute and State University

Project Costs Requested from FIPSE:

Budget Categories:	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
4. Personnel (salary & wages)	1,093.00	4,840.00	4,840.00	4,840.00	15,613.00
5. Fringe Benefits (employee benefits)	74.00	327.00	327.00	327.00	1,055.00
6. Travel	7,500.00	7,500.00	7,500.00	7,500.00	30,000.00
7. Equipment (purchase)					
8. Supplies (and materials)					
9. Contractual (enter partner totals here)	2,500.00	2,500.00	2,500.00	2,500.00	10,000.00
10. Other (equipment rental, printing, etc.)	5,500.00	1,500.00	1,500.00	1,500.00	10,000.00
11. Total Direct Costs (lines 4-10)	16,667.00	16,667.00	16,667.00	16,667.00	66,668.00
12. Indirect Costs* (8% of line 11)	1,333.00	1,333.00	1,333.00	1,333.00	5,332.00
13. Mobility Stipends	30,000.00	30,000.00	30,000.00	30,000.00	120,000.00
14. Language Stipends					
15. Subtotal of Stipends (lines 13 + 14)	30,000.00	30,000.00	30,000.00	30,000.00	120,000.00
16. Total Requested from FIPSE (lines 11 + 12 + 15) (These figures should appear on the Title Form)	48,000.00	48,000.00	48,000.00	48,000.00	192,000.00

Project Costs Not Requested from FIPSE:

17. Lead Partner Non-Federal Funds					
18. Subcontractor(s) Partner Non-Federal Funds					

Funds Requested by Foreign Partners:

19a. Total Requested from Canada					
19b. Total Requested from Mexico					
19c. Total Requested from Brazil					
19d. Total Requested from Europe					

*** Indirect Cost Information (To be completed by Your Business Office):**

If you are requesting reimbursement for indirect costs on line 12, please answer the following questions:

(1) Do you have an Indirect Cost Rate Agreement approved by the Federal Government? Yes No

(2) If Yes, please provide the following information:

* Period covered by the Indirect Cost Rate Agreement: From: To:

* Approving Federal Agency: ED Other (please specify):

(3) For Restricted Rate Programs (select one) -- Are you using a restricted indirect cost rate that:

Is included in your approved Indirect Cost Rate Agreement? Or, Complies with 34 CFR 76.584(c)(2)?

Table 2 a – Distribution of funding requested amongst participating EU institutions

The reference numbers (Nr 1, 2, 3, etc.) of the participating institutions must correspond to those used in section 4.

All amounts in Euros Funding requested by the participating EU institution	Total (equals amount in table 1)	Coordinating institution = Participating institution Nr 1	Participating institution Nr 2	Participating institution Nr 3	Participating institution Nr 4
1. Flat-rate sum for administrative costs	30.000	15.000	5.000	5.000	5.000
2 Transatlantic student mobility grants	120.000	30.000	30.000	30.000	30.000
3. Transatlantic faculty mobility grants	30.000	9.000	7.000	7.000	7.000
TOTAL	180.000	54.000	42.000	42.000	42.000

Table 2 b – Explanation for allocation of EU grant per participating institution

On what basis do you intend to distribute the EU grant among the participating institutions?

Flat rate administration:

- Each partner will receive an equal allowance per year of €1.250 to cover costs associated with project meetings (2 in Europe and 2 in North America).
- In addition the European coordinator will receive €2.500 per year to cover administrative costs associated with the European side of the consortium (coordination of EU and US partners, technical and financial reporting and dissemination of project outputs)

Student mobility grants:

- Over the EU funded life of the project, 4 years, each partner will send on average 6 students to US hosts for 1 semester (4 months) at €5.000.

Staff mobility

- Over the EU funded life of the project, 4 years, each partner will send 2 scholars (€2.000) for a combined maximum of 5 weeks (€5.000) to engage in teaching and curriculum development.
- The European coordinator has an additional budget to send 1 scholar (€1.000) for 1 week (€1.000) for dissemination and reporting purposes.

Tables 3: Details of transatlantic student mobility grants

Sending EU Institution	Number of students in transatlantic mobility (a)	Length of stay in months	Grant per student (€) (b)	Total student transatlantic mobility Grant cost (axb)
1. UCD	6	4	5.000	30.000
2. AUA	6	4	5.000	30.000
3. MPU	6	4	5.000	30.000
4. UNIBA	6	4	5.000	30.000
Total identical to line 2 in Table 1				€ 120.000

Table 4 Details of transatlantic faculty mobility grants

Sending EU Institution	Number of faculty in transatlantic mobility (a)	Average length of stay in weeks (b)	Mobility Grant (c) = (a x 1000 € x b)	Travel contribution (d) = (a x 1000 €)	Total faculty mobility grant (c+d)
1. UCD	3	2.0	6.000	3.000	9.000
2. AUA	2	2.5	5.000	2.000	7.000
3. MPU	2	2.5	5.000	2.000	7.000
4. UNIBA	2	2.5	5.000	2.000	7.000
		Subtotal	21.000	9.000	30.000
Total table 4 (subtotal c + subtotal d) to be identical to line 3 in Table 1					30.000

8. WORK PLAN

Follow the work plan table below, where appropriate.

<i>Component of project (major outputs)</i>	<i>Outputs to be achieved/produced by the end of the implementation of this component</i>	<i>Activities leading to this output</i>	<i>Activity to be started by this date and completed by this date</i>	<i>Partners</i>
1. Define the common threads within the discipline of biosystems engineering	White paper document defining the common threads	Actual and virtual project meetings In-house evaluation	9/2009 – 2/2010 (draft) 8/2010 (final)	VT lead, All
2. Globalize core BE courses by creating a database of multinational examples that can be drawn upon by instructors around the world	Database of multinational examples	Partners identify existing suitable materials Compilation of database structure Continued population of database as courses develop	9/2010 – 9/2011 (and then continuing additions)	UIUC lead, All
3. Develop innovative courses to advance the continuing development of BE programs in the US and EU	<i>What is Biosystems Engineering?</i> course <i>Design project</i> course <i>Innovation and entrepreneurship</i> course	For all three modules there will be a loop with 6 phases: 1. Define curriculum 2. Define learning outcomes 3. Define teaching strategies 4. Define assessments 5. Review 6. Redefine curriculum	1/2010 – 7/2010 (development) Fall 2010 (initial implementation) 8/2010 – 1/2011 (development) Spring 2011 (initial implementation) 3/2011 – 9/2011 (development) Fall 2011 (initial implementation)	AUA lead, All UCD lead, All UCD lead, All
4. Design student and staff /faculty mobility experiences to enhance the global perspectives of both	Comparison of grades/marks and standards Agreed workload / standard rating Project reports detailing mobility experiences	Compile partner specific documentation on marks and standards / grades Cross-correlate workload and levels Compile summary reports after each mobility event (staff /faculty and student	9/2009 – 12/2009 10/2009 – 12/2009 2010 - 2013	VT lead, All UNIBA lead, All VT/UCD lead, All
5. Create a cohort of students aware of, and able to work in, a global employment market	Graduates with international diploma supplement and degree transcript 48 students in mobility exchange including language and culture training	Agreed exchange of credit between institutions and use of Diploma Supplements or equivalent	2011-2013 (first graduates from project) 2010 – 2013 (first students travel in academic year 1 of the project)	All All

9. STUDENT MOBILITY

Academic Year 1: from 09/2009 to 08/2010

EU sending / USA hosting table: indicate the name of the institutions as well as the number of students from EU institutions planned to be sent to American institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants				Students exchanged <u>without</u> Transatlantic mobility grants				Total no. of students exchanged			
	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU 4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU 4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU 4
Hosting US 1	1	1	1	0	1	0	0	0	2	1	1	0
Hosting US 2	1	1	1	0	0	0	0	0	1	1	1	0

USA sending / EU hosting table: indicate the name of the institutions as well as the number of students from American institutions planned to be sent to EU institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants		Students exchanged <u>without</u> Transatlantic mobility grants		Total no. of students exchanged	
	Sending US 1	Sending US 2	Sending US 1	Sending US 2	Sending US 1	Sending US 2
Hosting EU 1	1	1	1	0	2	1
Hosting EU 2	1	1	0	0	1	1
Hosting EU 3	1	1	0	0	1	1
Hosting EU 4	0	0	0	0	0	0

Academic Year 2 : from 09/2010 to 08/2011

EU sending / USA hosting table: indicate the name of the institutions as well as the number of students from EU institutions planned to be sent to American institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants				Students exchanged <u>without</u> Transatlantic mobility grants				Total no. of students exchanged			
	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU4
Hosting US 1	0	1	1	1	1	0	0	0	1	1	1	1
Hosting US 2	0	1	1	1	0	0	0	0	0	1	1	1

USA sending / EU hosting table: indicate the name of the institutions as well as the number of students from American institutions planned to be sent to EU institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants		Students exchanged <u>without</u> Transatlantic mobility grants		Total no. of students exchanged	
	Sending US 1	Sending US 2	Sending US 1	Sending US 2	Sending US 1	Sending US 2
Hosting EU 1	0	0	1	0	1	0
Hosting EU 2	1	1	0	0	1	1
Hosting EU 3	1	1	0	0	1	1
Hosting EU 4	1	1	0	0	1	1

Academic Year 3 : from 09/2011 to 08/2012

EU sending / USA hosting table: indicate the name of the institutions as well as the number of students from EU institutions planned to be sent to American institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants				Students exchanged <u>without</u> Transatlantic mobility grants				Total no. of students exchanged			
	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU 4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU 4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU 4
Hosting US 1	1	0	1	1	1	0	0	0	2	1	1	0
Hosting US 2	1	0	1	1	0	0	0	0	1	1	1	0

USA sending / EU hosting table: indicate the name of the institutions as well as the number of students from American institutions planned to be sent to EU institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants		Students exchanged <u>without</u> Transatlantic mobility grants		Total no. of students exchanged	
	Sending US 1	Sending US 2	Sending US 1	Sending US 2	Sending US 1	Sending US 2
Hosting EU 1	1	1	1	0	2	1
Hosting EU 2	0	0	0	0	0	0
Hosting EU 3	1	1	0	0	1	1
Hosting EU 4	1	1	0	0	1	1

Academic Year 4 : from 09/2012 to 08/2013

EU sending / USA hosting table: indicate the name of the institutions as well as the number of students from EU institutions planned to be sent to American institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants				Students exchanged <u>without</u> Transatlantic mobility grants				Total no. of students exchanged			
	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU4
Hosting US 1	1	1	0	1	1	0	0	0	1	1	1	1
Hosting US 2	1	1	0	1	0	0	0	0	0	1	1	1

USA sending / EU hosting table: indicate the name of the institutions as well as the number of students from American institutions planned to be sent to EU institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants		Students exchanged <u>without</u> Transatlantic mobility grants		Total no. of students exchanged	
	Sending US 1	Sending US 2	Sending US 1	Sending US 2	Sending US 1	Sending US 2
Hosting EU 1	1	1	1	0	2	1
Hosting EU 2	1	1	0	0	1	1
Hosting EU 3	0	0	0	0	0	0
Hosting EU 4	1	1	0	0	1	1

TOTAL STUDENT MOBILITY FOR ALL ACADEMIC YEAR: from 09/2009 to 10/2013

EU sending / USA hosting table: indicate the name of the institutions as well as the number of students from EU institutions planned to be sent to American institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants				Students exchanged <u>without</u> Transatlantic mobility grants				Total no. of students exchanged			
	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU 4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU 4	Sending EU 1	Sending EU 2	Sending EU 3	Sending EU 4
Hosting US 1	3	3	3	3	4	0	0	0	7	3	3	3
Hosting US 2	3	3	3	3	0	0	0	0	3	3	3	3

USA sending / EU hosting table: indicate the name of the institutions as well as the number of students from American institutions planned to be sent to EU institutions in the corresponding box.

	Students exchanged <u>with</u> Transatlantic mobility grants		Students exchanged <u>without</u> Transatlantic mobility grants		Total no. of students exchanged	
	Sending US 1	Sending US 2	Sending US 1	Sending US 2	Sending US 1	Sending US 2
Hosting EU 1	3	3	4	0	7	3
Hosting EU 2	3	3	0	0	3	3
Hosting EU 3	3	3	0	0	3	3
Hosting EU 4	3	3	0	0	3	3

10. LETTERS OF ENDORSEMENT



UCD Office of the President

Oifig an Uachtaráin UCD

Tierney Building
University College Dublin
Belfield, Dublin 4, Ireland
T +353 1 716 1618
F +353 1 716 1170
President: Hugh R. Brady
MB BCH BAO BSc PhD MD FRCPI

Áras Uí Thiarnaigh
An Coláiste Ollscoile, Baile Átha Cliath
Belfield, Baile Átha Cliath 4, Éire
President@ucd.ie
www.ucd.ie/presoff/
Uachtarán: Aodh Ó Brádaigh
MB BCH BAO BSc PhD MD FRCPI

Friday, March 13, 2009

To: The Education, Audiovisual and Culture Executive Agency
EU-US Atlantis Call for Proposals 2009
Avenue du Bourget n°1 – BOUR 00/32
B – 1140 Brussels

From: Dr. Hugh Brady, President, University College Dublin

Re: EU-US Atlantis Proposal: *"Transatlantic Biosystems Engineering Curriculum and Mobility"*

Dear Sir/Madam,

It gives me great pleasure to write this letter of support for the project "Transatlantic Biosystems Engineering Curriculum and Mobility" coordinated by University College Dublin in Europe and Virginia Polytechnic Institute and State University in the United States of America. In UCD we place great emphasis on internationalisation of the student experience and value inter-institutional collaboration as significant educational asset for University staff and students. The exceptionally strong partnership that has been developed for this proposal is founded on existing collaborations: both coordinating institutions are members of Universitas 21; UCD Biosystems Engineering and Biological Systems Engineering at Virginia Tech have had a bilateral student exchange agreement for many years (there is a similar agreement with Iowa State University); there have been less formal collaborative links with both Texas A&M and University of Illinois over the last 20 years; and our links with the European partners are currently formalised through the Erasmus Network "Education and Research in Biosystems or Agricultural and Biological Engineering in Europe". I have every confidence, based on the past history of the coordinators here in UCD and in Virginia Tech that this collaborative project will be very successful, and UCD will provide full support.

The project focuses on using staff and student exchange to promote Biosystems Engineering through identification of global issues, curriculum development, two-way knowledge transfer between the European and US centres of excellence and using staff and student mobility to enhance global perspectives. The focus on defining core curriculum with global relevance (e.g. thermodynamics of biological systems and transport processes in biological systems) will drive the advancement of Biosystems Engineering as a subject addressing the key global issues of security and sustainable utilisation of air, water, land, energy, food and other biological resources. The internationalisation of staff and students in this subject area (with great significance for global sustainability) will be a major advance for University College Dublin and the other partner institutions integrated by the project.

University College Dublin is a leader in Third and Fourth level education in Ireland and Europe, and the “Transatlantic Biosystems Engineering Curriculum and Mobility” project will build on our existing research strengths in Biosystems Engineering to give undergraduate students and staff access to global opportunities in education in areas such as Biofuels and Bioenergy, Food Chain Integrity, Bioprocessing (adding value in the food chain), Sustainable Resource Systems, Environmental Engineering and Innovation Opportunities. There is going to be great demand for graduate engineers with knowledge of biological systems to support food, feed, fibre and energy production from the global land resource, which is of particular importance in Ireland at present.

University College Dublin has a long history of institutional collaboration in National (e.g. Programme for Research in Third Level Institutions, Science Foundation Ireland), European (e.g. Framework Programmes, Erasmus) and International (e.g. Universitas 21) programmes in education and research, has vast experience of managing and facilitating exchange of staff and students between institutions and has the necessary administrative infrastructure to address: financial and administrative management of the European partners; student enrolment, teaching and assessment; credit transfer; tuition / fee; planning of accommodation and travel; hosting of visiting staff; and Internet communications. The support of School Administration, Assessment Office, International Office and Student Welfare Services is guaranteed for all students and staff hosted by UCD.

The EU-US Atlantis proposal “Transatlantic Biosystems Engineering Curriculum and Mobility” is fully complimentary with the UCD strategy to build and maintain its position as an internationally integrated leader in University Education, and the focus on engineering of biological systems compliments existing research strengths in Earth Systems, Food and Health and Bioresources. I can therefore give my wholehearted support to this proposal.

Kindest Regards



Dr. Hugh Brady
President

Excellence in Mobility Project Proposal-EU-US Atlantis Program

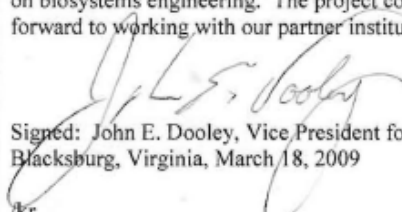
I am pleased to express the commitment of Virginia Tech to implement the proposed Excellence in Mobility project, "Transatlantic Biosystems Engineering Curriculum and Mobility." The infrastructure and personnel are in place to support both the outgoing and incoming students that will participate in the mobility aspect of the project. Virginia Tech is also committed to concluding agreements on tuition and credit recognition or transfer by the end of the first year of the project. Virginia Tech already has agreements with two of the partners, University College Dublin and Universidad Polit cnica de Madrid.

Virginia Tech currently sends more than 1100 students overseas annually to as many as 40 countries. The Education Abroad Office provides assistance to students (and parents) with all aspects of the education abroad experience. All of those services will be provided to the students (and faculty) who participate in this project. In addition, the Education Abroad Office will assist incoming students through the application, admission, and registration processes. Incoming students will find significant assistance and support through the Cranwell International Center at Virginia Tech as well.

Virginia Tech is fully committed to implementing mobility projects because they are integral to achieving the goals of the university's strategic plan. The proposed Excellence in Mobility project will contribute to several of the performance measures included in the strategic plan, specifically: (1) evidence of increased student engagement in learning initiatives, including involvement in foreign language study and education abroad; (2) increased satisfaction of graduates with opportunities to improve multicultural competencies; and (3) double the number of undergraduates in education abroad and other international experiences. In addition, one goal for graduate education is to establish a graduate education portfolio reflective of a 21st century university. One strategy toward achieving this goal is to increase the international experience for graduate students, including education abroad and foreign language training. Both undergraduate and Master's students will participate in the proposed project.

One particularly noteworthy aspect of the project is that the curriculum development component will impact both the students who participate in education abroad, as well as students who remain at their home institution. For example, the database of multinational examples will be a wonderful resource, not only for the Biological Systems Engineering program, but also for other disciplines as well. The web-based seminar course as well as the design module will provide opportunities for students in Blacksburg to participate with students from multiple countries. These activities will significantly increase our students' understanding of multicultural and international issues and increase their ability to contribute in a global society (one of the strategies in the strategic plan).

In summary, Virginia Tech is fully committed to implementing this Excellence in Mobility project focused on biosystems engineering. The project contributes to achieving the university's strategic goals. We look forward to working with our partner institutions.


Signed: John E. Dooley, Vice President for Outreach and International Affairs
Blacksburg, Virginia, March 18, 2009

/kr

Invent the Future

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
An equal opportunity, affirmative action institution

UNIVERSITY OF ILLINOIS
AT URBANA - CHAMPAIGN

College of Agricultural, Consumer
and Environmental Sciences

Office of the Dean
122 Mumford Hall, MC-710
1301 West Gregory Drive
Urbana, IL 61801-3605



March 11, 2009

Richard S. Gates
360C AESB
MC-644

Dear Richard:

Your proposal to the U.S. Department of Education Fund for the Improvement of Post-Secondary Education (FIPSE) is of great interest to the College of Agricultural, Consumer and Environmental Sciences (ACES). As you are aware, the University's strategic plan calls for further internationalization of the undergraduate student education. A successful FIPSE project would complement our current cooperative programs with partners in Europe, particularly since we currently do not have agreements with universities in the U.K. or Ireland and only one other one in Spain. The Department of Agricultural and Biological Engineering (ABE) has a strong record of engineering research, education and Extension (ranked first in the U.S. the last three years) and is excellently positioned to develop European collaborations in a "Transatlantic Biosystems Engineering Curriculum and Mobility" project.

Your project's refinement of the curriculum to focus on biosystems engineering will provide wonderful opportunities for our graduates. Coupled with your stated goals of collaborative curricular development in biological systems engineering and a formalized international internship, you have the elements of an excellent project with impacts beyond the duration of the grant.

If your team is successful, I will work with you to further develop an interest in the student population outside of the ABE department. There is real value in promoting in-country agricultural training for our students, opportunities to forge new industrial partnerships for cooperative agricultural experiences, and job opportunities for our graduates. This project will provide a valuable enhancement of our College's existing initiatives with Europe.

To assist your project, I am willing to commit up to \$1,000 per ACES student that is involved in the FIPSE program. These funds can be used to offset travel costs, partially pay housing, tuition or language training, or in any other way that we mutually agree would benefit the project goals.

I wish you great success in your application.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Easter'.

Robert A. Easter
Dean

RAE*Bch



College of Engineering
International Programs in Engineering
1308 W. Green St.
210 Engineering Hall
Urbana, IL 61801

March 12, 2009

Professor Richard Gates
Agricultural & Biological Engr.
360C AESB, MC-644

Dear Prof. Gates:

I am writing in my role as Director of the International Programs in Engineering (IPENG), College of Engineering, to verify support for the US-EU Atlantis Consortium program. Your program provides a good opportunity to enhancing the College's commitment to increasing international visibility to its students and faculty through joint collaborations with European partners. The College of Engineering will be able to support this program through the following:

- Review and support agreements that will include credit transfer support and tuition waivers,
- Student language preparation through a specialized language program designed specifically for engineering students

In addition, our office will handle at no cost to your program, as we do for all study abroad students in the College of Engineering, all the administrative issues associated with student travel overseas, including but not limited to help with obtaining passports and visas, study abroad insurance, and health and risk management procedures.

Sincerely,

A handwritten signature in black ink that reads 'Teresa J. Finis'.

Teresa Finis
Director, International Programs in Engineering

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Department of Agricultural and Biological Engineering

College of Agricultural, Consumer and Environmental
Sciences and College of Engineering
338 Agricultural Engineering Sciences Building
1304 West Pennsylvania Avenue
Urbana, IL 61801
U.S.A.



March 12, 2009

Dr. Richard S. Gates
Department of Agricultural and Biological Engineering
University of Illinois
1304 W. Pennsylvania Avenue
Urbana, IL 61801

Dear Rich:

I am writing this letter to express my strongest support for the proposal "Transatlantic Biosystems Engineering Curriculum and Mobility" to the U.S. Department of Education Fund for the Improvement of Post-Secondary Education under the EU-US Atlantis Program. Our department will provide necessary faculty, staff, and administrative support for the proposed program. We will also assist our students participating in this program in identifying and obtaining academic and financial resources to enhance their educational experience.

As you know, our department's mission is to integrate life and engineering for enhancement of complex living systems involving agriculture, food, environment, and energy. Our current technical emphases are in the areas of agricultural automation, bio-energy and bio-products, sustainable environment, biological engineering, and systems informatics and analysis. We have set our strategic goals to enhance student recruitment, retention and education, integrate and enhance curricula, increase resources, design our organization to advance strategic thrusts, and strengthen faculty capacity. The proposed program aligns perfectly with our departmental strategic plan and, if funded, will significantly enhance the international dimension of the educational experience of the students from multiple institutions in Europe and the U.S.

In the biological systems area, we currently have research and educational activities in a number of focus areas that should mesh well with both U.S. and European partners and their students' course requirements as both core competencies and as technical electives. All of these are positioned to provide hands-on opportunities for student learning in the proposed program.

We have been actively participating and leading, with our U.S. and international partner institutions, in the development of biological systems engineering as a professional and educational discipline for many years. Our effort in working with the academic program leaders within the American Society of Agricultural and Biological Engineers has resulted in a better understanding and coordination of the biological engineering field, including domains, core competencies, accreditation, rankings, etc.

Telephone +1-217-333-3570 · fax +1-217-244-0323
email kcting@illinois.edu · website abe.illinois.edu

As you know, we were a contributing member of the previous two-year Atlantis project on “Proposed Policy Measures in Support of the Evolution of the Emerging Biosystems Engineering Discipline in U.S. and Europe.” This project successfully addressed the key issues relevant to the development of biosystems engineering field at the international level. The proposed program is very timely and will further promote that work, and result in enhanced international efforts in advancing the important field of biological systems engineering.

Our department very much looks forward to being a contributing partner in the proposed program on “Transatlantic Biosystems Engineering Curriculum and Mobility.”

Sincerely,



K.C. Ting, Ph.D., P.E.
Professor and Department Head



KCT:rlf

HELLENIC REPUBLIC



**AGRICULTURAL UNIVERSITY OF ATHENS
RECTOR'S OFFICE**

Post Code: 75, Iera Odos – 11855 Athens
Tel:: 210 5294802
Fax:: 210 5294819
e-mail: r@aua.gr

Monday, March 16, 2009

Ref. No: 2410

To: The Education, Audiovisual and Culture Executive Agency
EU-US Atlantis Call for Proposals 2009
Avenue du Bourget n°1 – BOUR 00/32
B – 1140 Brussels

From: Prof. George Zervas, Rector, Agricultural University of Athens

Re: EU-US Atlantis Proposal: *"Transatlantic Biosystems Engineering Curriculum and Mobility"*

Dear Sir/Madam,

It gives me great pleasure to write this letter of support for the project "Transatlantic Biosystems Engineering Curriculum and Mobility" coordinated by University College Dublin in Europe and Virginia Polytechnic Institute and State University in the United States of America. In Agricultural University of Athens (AUA) we place great emphasis on internationalisation of the student experience and value inter-institutional collaboration as significant educational asset for University staff and students. The exceptionally strong partnership that has been developed for this proposal is founded on existing collaborations, namely the EU – Erasmus funded Thematic Networks: USAEE (University Studies of Agricultural Engineering in Europe) and ERABEE (Education and Research in Biosystems or Agricultural and Biological Engineering in Europe) along with the EU – US ATLANTIS project: POMSEBES (Policy Oriented Measures in Support of the evolving Biosystems Engineering in USA-EU). I have every confidence, based on the past history that this collaborative project will be very successful, and AUA will provide full support.

The project focuses on using staff and student exchange to promote Biosystems Engineering through identification of global issues, curriculum development, two-way knowledge transfer between the European and US centres of excellence and using staff and student mobility to enhance global

perspectives. The focus on defining core curriculum with global relevance (e.g. thermodynamics of biological systems and transport processes in biological systems) will drive the advancement of Biosystems Engineering as a subject addressing the key global issues of security and sustainable utilisation of air, water, land, energy, food and other biological resources. The internationalisation of staff and students in this subject area (with great significance for global sustainability) will be a major advance for AUA and the other partner institutions integrated by the project.

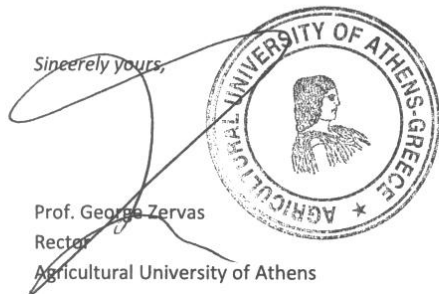
AUA provides strong education related to all three cycles and the “Transatlantic Biosystems Engineering Curriculum and Mobility” project will build on our existing research strengths in Agricultural and Biosystems Engineering to give undergraduate students and staff access to global opportunities in education in areas such as Biofuels and Bioenergy, Food Chain Integrity, Bioprocessing (adding value in the food chain), Sustainable Resource Systems, Environmental Engineering and Innovation Opportunities. There is going to be great demand for graduate engineers with knowledge of biological systems to support food, feed, fibre and energy production from the global land resource, which is of particular importance in Ireland at present.

AUA has a long history of institutional collaboration in National (e.g. General Secretariat of Research, Ministry of National Education and Religious Affairs, Ministry of Rural Development and Food), European (e.g. Erasmus) and International (e.g. EU-US ATLANTIS) programmes in education and research, has vast experience of managing and facilitating exchange of staff and students between institutions and has the necessary administrative infrastructure to address: financial and administrative management of the European partners; student enrolment, teaching and assessment; credit transfer; tuition / fee; planning of accommodation and travel; hosting of visiting staff; and Internet communications. The support of School Administration, International Relations Office and Student Welfare Services is guaranteed for all students and staff hosted by AUA.

The EU-US Atlantis proposal “Transatlantic Biosystems Engineering Curriculum and Mobility” is fully complimentary with the AUA strategy to build and maintain its position as an internationally integrated key player in Agricultural Sciences and Engineering University Education, and the focus on engineering of biological systems compliments existing research strengths in Earth Systems, Food and Health and Bioresources. I can therefore give my wholehearted support to this proposal.

Sincerely yours,

Prof. George Zervas
Rector
Agricultural University of Athens





POLITÉCNICA

José Manuel Páez Borrallo
VICE-RECTOR
FOR INTERNATIONAL RELATIONS

Friday, March 20, 2009

To: The Education, Audiovisual and Culture Executive Agency
EU-US Atlantis Call for Proposals 2009
Avenue du Bourget n°1 – BOUR 00/32
B – 1140 Brussels

From: Dr. Javier Uceda. Rector, Universidad Politécnica de Madrid

Re: EU-US Atlantis Proposal: *"Transatlantic Biosystems Engineering Curriculum and Mobility TABE.NET"*

Dear Sir/Madam,

It gives me great pleasure to write this letter of support for the project *"Transatlantic Biosystems Engineering Curriculum and Mobility TABE.NET"* coordinated by University College Dublin in Europe and Virginia Polytechnic Institute and State University in the United States of America. In UPM we place great emphasis on internationalisation of the student experience and value inter-institutional collaboration as significant educational asset for University staff and students. The exceptionally strong partnership that has been developed for this proposal is founded on existing collaborations: both coordinating institutions are members of Universitas 21; UCD Biosystems Engineering and Biological Systems Engineering at Virginia Tech have had a bilateral student exchange agreement for many years. UPM are also linked with the European partners, currently formalised through the Erasmus Network *"Education and Research in Biosystems or Agricultural and Biological Engineering in Europe ERABEE"* and with the American partners through the ATLANTIS project *"Policy Oriented Measures in Support of the Evolving Biosystems Engineering Studies in USA – EU (POMSEBES)"*. I have every confidence that this collaborative project will be very successful, and UPM will provide full support.

The project focuses on using staff and student exchange to promote Biosystems Engineering through identification of global issues, curriculum development, two-way knowledge transfer between the European and US centres of excellence and using staff and student mobility to enhance global perspectives. The focus on defining core curriculum with global relevance will drive the advancement of Biosystems Engineering as a subject addressing the key global issues of security and sustainable utilisation of air, water, land, energy, food and other biological resources. The internationalisation of staff and students in this subject area (with great significance for global sustainability) will be a major advance for UPM and the other partner institutions integrated by the project.



POLITÉCNICA

José Manuel Páez Borrillo
VICE-RECTOR
FOR INTERNATIONAL RELATIONS

The EU-US Atlantis proposal "Transatlantic Biosystems Engineering Curriculum and Mobility" is fully complimentary with the UPM strategy to build and maintain its position as an internationally integrated leader in University Education, and the focus on engineering of biological systems compliments existing research strengths in Earth Systems, Food and Health and Bioresources. I can therefore give my wholehearted support to this proposal.

Kindest Regards

P. A.
Dr. Javier Uceda
Rector, Universidad Politécnica de Madrid



Università degli Studi di Bari

LETTER OF ENDORSEMENT

The University of Bari - Department of Engineering and Management of the Agricultural, Livestock and Forest Systems (PROGESA) is pleased to submit its agreement to the Consortium EU-US Atlantis with the goal of establishing an international institutional collaboration that will contribute to the development and internationalization of the Biosystems Engineering curricula.

The University of Bari is an international high-integrated institution that, thanks to the start up of several agreements with foreign universities, led to the implementation of new possibilities for exchange. The University is a partner in many cooperative agreements with higher education institutions in different parts of the world, to promote and develop technical and scientific research and co-operation. The Lifelong Learning/Erasmus Programmes provides students with the possibility to study in a foreign university to improve the quality of education by enhancing European cooperation and increasing access to the range of learning opportunities available in Europe.

The PROGESA Department provides teaching within the Faculty of Agriculture and performs researches in biosystems engineering. The research themes regard: materials, equipment and energy balance climate models for rural structures such as livestock buildings, farmhouses, greenhouses, buildings for food storage and processing; development of environmentally friendly innovative technologies and materials in agriculture; application of renewable energy sources; agricultural machinery and mechanization; rationale use of energy; management and preservation of the rural land and environment; monitoring of sediment transport in water courses; soil bioengineering techniques for hillslopes stability and erosion control. The department is provided with laboratories, experimental farms and field stations.

The PROGESA Department provides a Ph.D programme in "Land and agro-forestry environment engineering".

The PROGESA Department has participated in several projects funded by the European Commission: RTD "Biodegradable plastics for environmentally friendly mulching and low tunnel cultivation - BIOPLASTICS" (2001-2005); LIFE Environment "Biodegradable coverages for sustainable agriculture - BIO.CO.AGRI." (2003-2005); CRAFT "Development of protective structures covered with permeable materials for agricultural use - AGRONETS" (2003-2006); University Studies of Agricultural Engineering in Europe - USAEE, European Thematic Network (2003-2006) - ERABEE Thematic Network (2007-2010), is a follow-up of the USAEE Thematic Network* and is co-financed by the European Community in the framework of the LLP Programme - Collective Research "Labelling agricultural plastic waste for valorising the waste stream - LABELAGRIWASTE" (2006-2009).

The study programmes of Italian Universities (D.M. n. 270 dated 22nd October 2004 - Law of the Ministry of Education, University and Research) is organized in a 3+2 years cycle. According to the ECTS credit system used in Italian institutions, the total student workload in one year is 60 CFU, which are considered equivalent to 60 ECTS; each CFU represents 25 hours of learning, both as aided learning (front lessons, contact hours, practical activities, seminars) (generally 10 hours) and as individual studies (generally 15 hours), corresponding to 1500 hours a year.

The student can choose between a job-oriented study programme (180 CFU), finishing with a three-year degree ("Laurea"), and a methodological-educational one (180 CFU), preparing for another two-year study programme (120 CFU) for achieving the "Laurea Magistrale", corresponding to the Master of Science degree.

The Faculty of Agriculture provides four three-year degrees and six Master of Science degrees.

For further information: http://www.agr.uniba.it/did_corsistudio0809.php

The University of Bari will be able to provide the necessary resources and the necessary administrative support to be an eligible partner in the project.

Kindest regards

Bari, 19th March, 2008



RECTOR
Prof. Corrado Petrocelli

A handwritten signature in blue ink, appearing to read "C. Petrocelli", is written over the printed name of the Rector.

11. LEGAL STATUS DOCUMENTATION



LEGAL ENTITIES

PRIVACY STATEMENT

http://ec.europa.eu/budget/execution/legal_entities_fr.htm

PUBLIC ENTITIES

TYPE OF COMPANY	BODY CORPORATE ESTABLISHED BY STATUTE		
NGO	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	(Non-Governmental Organisation)
NAME(S)	UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN		
ABBREVIATION	UCD		
OFFICIAL ADDRESS	BELFIELD, DUBLIN 4, IRELAND		
POSTCODE	DUBLIN 6	P.O. BOX	N/A.
TOWN/CITY	DUBLIN		
COUNTRY	IRELAND		
VAT**	IE 6517386 K		
PLACE OF REGISTRATION	IRELAND		
DATE OF REGISTRATION	<input type="text"/>	<input type="text"/>	<input type="text"/>
	DD	MM	YYYY
REGISTRATION No	IE 6517386 K		
PHONE	+353 - 1 - 7167460	FAX	+353 - 1 - 7167415
E-MAIL	DICK.HUDEN@UCD.IE		

THIS "LEGAL ENTITIES" FORM SHOULD BE COMPLETED, SIGNED AND RETURNED TOGETHER WITH:
 * A COPY OF THE RESOLUTION, LAW, DECREE OR DECISION ESTABLISHING THE ENTITY IN QUESTION;
 * OR, FAILING THAT, ANY OTHER OFFICIAL DOCUMENT ATTESTING TO THE ESTABLISHMENT OF THE ENTITY BY THE NATIONAL AUTHORITIES
 ** IF THIS FIELD IS COMPLETED, PLEASE ATTACH AN OFFICIAL VAT DOCUMENT

DATE:	STAMP
NAME + FUNCTION OF AUTHORISED REPRESENTATIVE	UNIVERSITY COLLEGE DUBLIN <i>June Jordan</i> HEAD OF FINANCE
SIGNATURE	Date 13/3/2009



UCD Corporate and Legal Affairs
Secretary's Office

Oifig an Rúnaí Corparáideach agus
Gnóthaí Dlíthiúla UCD

Room 118, Tierney Building
University College Dublin
Belfield, Dublin 4, Ireland
T +353 1 716 1458/1411
F +353 1 716 1162

Seomra 118, Áras Uí Thiarnaigh
An Coláiste Ollscoile, Baile Átha Cliath
Belfield, Baile Átha Cliath 4, Éire
corporate.legal@ucd.ie
www.ucd.ie

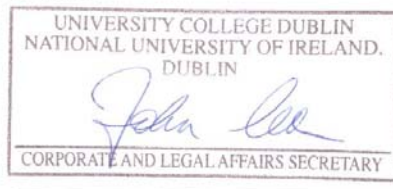
12th March 2009

To Whom It May Concern

Organisation Identification

University College Dublin was originally constituted in 1908 by Charter under the Irish Universities Act, 1908 as a constituent college of the National University of Ireland. It was reconstituted as a University under the Universities Act, 1997 (section 7 & second schedule) with the name University College Dublin, National University of Ireland, Dublin. Copies of section 7 and the second schedule to the Act of 1997 are attached. The full enactment can be accessed at <http://www.irishstatutebook.ie/front.html>.

Signed:



John Coman
Corporate and Legal Affairs Secretary

FIRST SCHEDULE

ENACTMENTS REPEALED

Section 6.

PART I

No. and Year	Short Title
No. 25 of 1980	National Institute for Higher Education, Limerick, Act, 1980 National Institute for Higher Education, Dublin, Act, 1980
No. 30 of 1980	

PART II

Number and Year (1)	Short Title (2)	Extent of Repeal (3)
No. 14 of 1989	University of Limerick Act, 1989 Dublin City University Act, 1989	Sections 3, 4 and 5
No. 15 of 1989		Sections 3, 4 and 5

SECOND SCHEDULE

TABLE

Constituent College (1)	Name of Constituent University (2)
University College, Cork	National University of Ireland, Cork Ollscoil na hÉireann, Corcaigh National University of Ireland, Dublin Ollscoil na hÉireann, Baile Átha Cliath National University of Ireland, Galway Ollscoil na hÉireann, Gaillimh
University College, Dublin	
University College, Galway	

Section 7 (1).

THIRD SCHEDULE

GOVERNING AUTHORITY

Section 15 (4).

1. (1) As soon as practicable after its establishment, the governing authority of a university shall provide and retain in its possession a seal of the university.

(2) The seal of a university shall be authenticated by the signature of the chairperson or a member of the governing authority, and by the signature of an employee of the university, authorised by the governing authority to act in that behalf.

(3) Judicial notice shall be taken of the seal of a university, and every document purporting to be an instrument made by a university and to be sealed with the seal of the university (purporting to be authenticated in accordance with this Schedule) shall be received in evidence and shall, unless the contrary is shown, be deemed to be such instrument, without further proof.

7 Universities Act, 1997

PART II ESTABLISHMENT AND IDENTITY OF UNIVERSITIES

- Reconstitution of constituent colleges.
- 7.—(1) The constituent colleges shall, by virtue of this section, become and be universities, and each college named in column 1 of the Second Schedule shall be known by the corresponding name in the English language or in the Irish language in *column 2* of that Schedule opposite to the name mentioned in *column 1*.
- (2) The universities as constituted by *subsection (1)* shall be constituent universities of the National University of Ireland and references to "college" or "constituent college" in the Irish Universities Act, 1908 or in the charter of the National University of Ireland, or in the charters of those constituent colleges, shall be construed as references to those constituent universities as constituted from time to time.
- (3) A reference to a constituent college in any other Act or in a statutory instrument made under an Act, or in the memorandum or articles of association of any company or any other legal document, shall be construed as a reference to the corresponding constituent university referred to in *subsection (1)* as constituted from time to time.
- (4) Where immediately before the commencement of this Part any legal proceedings in relation to a constituent college were pending to which the constituent college was party, the name of the corresponding constituent university shall on that commencement be substituted in the proceedings for the name of the constituent college, and the proceedings shall not abate by reason of the substitution.

12. DECLARATION

TO BE COMPLETED BY THE PERSON LEGALLY AUTHORISED TO SIGN ON BEHALF OF THE REQUESTING / CONTRACTING INSTITUTION.

I, the undersigned, certify that all information contained in this application, including project description, is correct to the best of my knowledge and am aware of the content of the annexes to the application form.

I confirm that my institution has the financial and operational capacity to complete the proposed project.

I take note that under the provisions of the Financial Regulation applicable to the general budget of the European Communities¹, grants may not be awarded to applicants who are in any of the following situations:

- (a) if they are bankrupt or being wound up, are having their affairs administered by the courts, have entered into an arrangement with creditors, have suspended business activities, are the subject of proceedings concerning those matters, or are in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- (b) if they have been convicted of an offence concerning their professional conduct by a judgment which has the force of res judicata;
- (c) if they have been guilty of grave professional misconduct proven by any means which the contracting authority can justify;
- (d) if they have not fulfilled obligations relating to the payment of social security contributions or the payment of taxes in accordance with the legal provisions of the country in which they are established or with those of the country of the contracting authority or those of the country where the contract is to be performed;
- (e) if they have been the subject of a judgment which has the force of res judicata for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the Communities' financial interests;
- (f) if following another procurement procedure or grant award procedure financed by the Community budget, they have been declared to be in serious breach of contract for failure to comply with their contractual obligations.
- (g) if, in their grant application, they are subject to a conflict of interest;
- (h) if, in their grant application, they are guilty of misrepresentation in supplying the information required by the contracting authority as a condition of participation in the grant award procedure or fail to supply this information.

I confirm that neither I nor the institution for which I am acting as legal representative are in any of the situations described above, and am aware that the penalties set out in the Financial Regulation may be applied in the case of a false declaration.

In the event that my grant application is successful, I authorise the Commission/ the Agency to publish on its internet site or in any other appropriate medium:

- The name and address of the beneficiary of the grant;
- The subject of the grant;
- The amount awarded and the rate of funding of the costs of the approved work programme.

Place: UCD, Dublin

Date 18 /03 / 2009 (day/month/year)

Signature



Stamp of the applicant/ contracting institution

Name and position in capitals DR HUGH BRADY, PRESIDENT



¹ Council Regulation No 1605/2002 (OJ L248 of 16/09/2002) and Commission Regulation No 2342/2002 (OJ L357 of 31/12/2002). These can be consulted in the Official Journal online at : <http://europa.eu.int/eur-lex/en/oj/index-list.html>

Checklist

All questions have been answered	<input checked="" type="checkbox"/>
Each page has been numbered	<input checked="" type="checkbox"/>
The proposal narrative (point 4) has been co-signed by the EU and US project leaders	<input checked="" type="checkbox"/>
A signed original of the financial identification form (in annex III) of the EU Lead institution is attached (point 5.1.4)	<input checked="" type="checkbox"/>
Copies of the CVs of staff involved in the project have been included.(Point 6)	<input checked="" type="checkbox"/>
The budget is indicated in Euros and checked for calculation errors (point 7)	<input checked="" type="checkbox"/>
The application includes the letters of endorsements from all the partners in the project (point 10).	<input checked="" type="checkbox"/>
The legal status form (in annex IV)has been completed for the EU lead institution (point 11)	<input checked="" type="checkbox"/>
The Declaration (point 12) of original application has been signed by the legal representative of the EU lead institution.	<input checked="" type="checkbox"/>
The original and 2 copies thereof are being sent before the closing date.	<input checked="" type="checkbox"/>

ANNEX 1. Resumes of Key Personnel

Name:	Nicholas Mark Holden
Address:	UCD School of Agriculture, Food Science and Veterinary Medicine
Summary:	<p>Qualifications BSc (Hons) Geography MSc (Soil Science) MEngSc (Agricultural Engineering) PhD (Soil Science)</p> <p>Current Appointment Associate Professor of Biosystems Engineering (since 2006) UCD School of Agriculture, Food Science and Veterinary Medicine, University College Dublin</p> <p>Teaching Modules: Precision Agriculture, Computer and Manufacturing Technology, Biosystems Engineering Design Challenge, Thesis (Biosystems Engineering), Major Project II</p> <p>I successfully led: (i) IEI Accreditation of the BE (Hons) Biosystems Engineering degree (ii) ASABE Recognition of the BAgrSc (Hons) Engineering Technology degree (iii) the modularisation and transition to outcome based learning for the Biosystems Engineering and Engineering Technology degrees and (iv) the modularisation of Level 4 programmes in the UCD School of Agriculture, Food Science and Veterinary Medicine.</p> <p>Academic Leadership Deputy Director of the UCD Life Sciences Graduate School / Chair of Life Sciences' Graduate Taught Programme Board. Head of Subject: Biosystems Engineering Director of UCD Bioresources Research Centre</p> <p>Research interests Agricultural Systems, Bioresources Modelling, Agrometeorology: Climate Change Impacts & Mitigation, Soils: water transport, quality.</p> <p>Research income I am/have been Principal Investigator, Work Package Coordinator or Partner for 25 projects worth over €9M, with personal responsibility for the management of over €2.9M</p> <p>Publications Refereed journal papers: 75 published, 9 under peer review Conference publications: 93 Book contributions: 2 edited, 1 co-author, 17 chapter contributions</p> <p>My Research Team Supervised 12 PhDs and 5 Masters by research to successful completion Supervised 4 post-doctoral researchers to successful completion Currently supervising 9 PhD students 1Masters student and recruiting for 1 PhD Currently supervising 4 post-doctoral researcher and am recruiting for 1 position</p> <p>Membership of Societies Soil Science Society of Ireland (since 1989) – Secretary/Treasurer since 2004 British Society of Soil Science (since 1991) – winner Silver Jubilee Medal 1993 Soil Science Society of America (since 1995) American Society of Agricultural and Biological Engineers (since 2003) – member of committee ED206</p>

Name:	Mary Leigh Wolfe						
Address:	VT, Biological Systems Engineering						
Summary:							
<p>Qualifications</p> <table> <tr> <td>Virginia Polytechnic Institute and State University Agricultural Engineering</td> <td>B.S. 1979</td> </tr> <tr> <td>Virginia Polytechnic Institute and State University Agricultural Engineering</td> <td>M.S. 1982</td> </tr> <tr> <td>University of Minnesota Agricultural Engineering</td> <td>Ph.D. 1986</td> </tr> </table>		Virginia Polytechnic Institute and State University Agricultural Engineering	B.S. 1979	Virginia Polytechnic Institute and State University Agricultural Engineering	M.S. 1982	University of Minnesota Agricultural Engineering	Ph.D. 1986
Virginia Polytechnic Institute and State University Agricultural Engineering	B.S. 1979						
Virginia Polytechnic Institute and State University Agricultural Engineering	M.S. 1982						
University of Minnesota Agricultural Engineering	Ph.D. 1986						
<p>Current Appointment</p> <p>Professor and Assistant Department Head for Teaching, Department of Biological Systems Engineering, Virginia Polytechnic Institute and State University, Blacksburg</p>							
<p>Teaching</p> <p>Graduate and undergraduate courses: Nonpoint Source Pollution Modelling; Land and Water Resources Engineering; Watershed Assessment, Management and Planning</p> <p>Co-PI for curriculum development project "Reformulating General Engineering and Biological Systems Engineering Programs at Virginia Tech", National Science Foundation, 9/15/04-9/14/09</p>							
<p>Academic Leadership</p> <p>Assistant Department Head, BSE – coordinate all aspects of undergraduate teaching program</p> <p>Engineering Accreditation Commission (EAC) of ABET, Inc.: Past-Chair, 2008-2009; Chair, 2007-2008; Chair-elect, 2006-2007; Vice Chair of Operations, 2005-2006; Executive Committee, Member At-Large, 2003-2005; Commissioner, 2000-present</p>							
<p>Research Interests</p> <p>Hydrology, nonpoint source pollution control, nutrient management, hydrologic and water quality modelling</p>							
<p>Funded Research</p> <p>I am/have been principal investigator for 19 projects with funding over \$1.1M and co-principal investigator for 40 projects with funding over \$7.2M.</p>							
<p>Publications</p> <p>Author or co-author for 26 refereed journal articles, 4 book chapters, over 60 conference publications</p>							
<p>Membership of Societies</p> <p>American Society of Agricultural and Biological Engineers (ASABE) - Foundation Board of Trustees, 2008-present; Nominating Committee, 2005-2007; Board of Trustees, 2000- 2002; Board of Directors, 1993-1995</p> <p>American Society for Engineering Education</p> <p>Soil and Water Conservation Society</p>							
<p>Selected Awards and Recognition</p> <p>College of Fellows, American Institute for Medical and Biological Engineering (AIMBE), 2009</p> <p>Fellow, American Society of Agricultural and Biological Engineers (ASABE), 2006</p> <p>USDA Secretary's Honor Award, awarded to group of USDA and academic personnel for research contribution to, development of, and implementation of the Phosphorus Index, 2003</p> <p>Fellowship awarded by Organization for Economic Cooperation and Development (OECD), Cooperative Research Programme: Biological Resource Management for Sustainable Agricultural Systems, 2003</p>							

Name:	Richard S. Gates
Address:	UIUC, Department of Agricultural and Biological Engineering
Summary:	
<p>Qualifications B.S. Agricultural Engineering, University of Minnesota, 1978. M.S. Agricultural Engineering, Cornell University, 1980. Ph.D. Biological Engineering, Cornell University, 1984.</p> <p>Current Appointment University of Illinois: Professor, August 2007 – present</p> <p>Teaching Undergraduate and graduate courses in probability and statistics, numerical methods, heat and mass transfer, psychrometrics, environment control, data acquisition and control, instrumentation, nonlinear optimization</p> <p>Academic Leadership Past Chair of the Department of Biosystems and Agricultural Engineering, University of Kentucky. Study visits / sabbaticals to Dijon, France, South Africa (University of Natal), Greece (Agricultural University of Athens), Japan (Kitasato University), and Technion University, Israel. Past leader of a US-Brazil Consortium between University of Kentucky, Iowa State University, Federal Universities of Viçosa, Campina Grande, Lavras and University of São Paulo – Piracicaba. On the board for Section II of the CIGR (International Agricultural Engineering Commission).</p> <p>Henry Giese Structures and Environment Award, ASABE, 2006. Patriotic Employer Award, National Committee for Employer Support of the Guard and Reserve</p> <p>Research interests Includes air quality, interior environmental analysis, control and simulation; greenhouse engineering, vapor pressure deficit control systems, livestock production models for real-time economic optimization, and manipulating livestock diets to reduce gaseous emissions and environment impacts.</p> <p>Research income Extensive experience over</p> <p>Publications Publications in Refereed Journals 108 In Review: 3 In Preparation: 4</p> <p>Membership of Societies Registered Professional Engineer: KY PE-14892 United Egg Producers, Environmental Scientific Panel, Research Committee Chair. Poultry Science Association, Environmental Technical Committee. American Society of Agricultural and Biological Engineers (ASABE) American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Federation of Animal Science Societies (FASS) Poultry Science Association (PSA) World Poultry Association (WPA) Sigma Xi (Research) (1982-present), Alpha Epsilon (Agricultural Engineering) (1977-present), Gamma Sigma Delta</p>	

Name:	Demetres Briassoulis
Address:	AUA, Natural Resources Management and Agricultural Engineering
Summary:	
<p>Qualifications Diploma Agricultural University of Athens (5-years; G.P.A. 9/10) 1976, M.S. in Ag. Engineering, University of Illinois, Urbana, (G.P.A. 5/5) Jan, 1982, Ph.D. in Ag. Engineering, University of Illinois, Urbana, (G.P.A. 5/5) May, 1985, M.S. in Civil Engineering, University of Illinois, Urbana, (G.P.A. 5/5) May, 1985, Ph.D. in Civil Engineering, University of Illinois, Urbana, (G.P.A. 5/5) May 1987</p> <p>Current Appointment Professor January 1997-present, Dept. of Agr. Engineering, Agricultural University of Athens</p> <p>Teaching Graduate: Advanced Strength of Materials, Matrix Analysis of Structures and Finite Element Method of Analysis Undergraduate: Structural Analysis, Strength of Materials, Farm Structures, Design of Steel Structures, Soil Mechanics.</p> <p>Academic Leadership Associate Director of the Division of Farm Structures and Agricultural Mechanisation, Department of Agricultural Engineering, AUA. Responsible for Socrates programme for Department of Agricultural Engineering, AUA</p> <p>Research interests Structural engineering, computational mechanics, materials science and technology, agricultural plastics, bio-based and biodegradable materials, behaviour, ageing and quality assessment.</p> <p>Research income I am/have been Coordinator or Partner for 19 projects (13 European) worth over €8M, and principal investigator in five projects.</p> <p>Publications Refereed journal papers: 58 published Conference refereed publications: 66 (international), 18 (national) Book contributions: 10 edited, 1 chapter contribution</p> <p>My Research Team Supervised 3 Masters by research to successful completion Supervised 2 European and 4 national post-doctoral researchers to successful completion Currently supervising 1 PhD student Currently recruiting for 1 post-doctoral researcher position</p> <p>Membership of Societies Member of the European Society of Agricultural Engineers; Chairman of "SIG-22: Greenhouse Systems Design", European Society of Agricultural Engineers Member of the Project Team for the Eurocode-1 (CEN TC250/SC1) Member of the WG 1 for the Standards for greenhouses (CEN TC284) Member of the Greek Society of Theoretical and Applied Mechanics Member of the Metal Structures Research Society of Greece Member of the Greek Society of Computational Mechanics Member of Geotechnical Chamber of Greece</p>	

Name:	Francisco Ayuga
Address:	UPM, Buildings, Infrastructures and Projects for Rural and Environmental Engineering
Summary:	
<p>Qualifications Agricultural Engineer (MSc) (Ingeniero Agrónomo) PhD in Agricultural Engineering</p> <p>Current Appointment Professor in Rural Buildings and Infrastructures. Escuela Técnica Superior de Ingenieros Agrónomos (ETSIA) (School of Agricultural Engineers)</p> <p>Teaching. Teaching (Year 2008/2009) Agricultural and Agrifood Buildings 5^oyear. ETSIA Rural Infrastructures. 5^o year. ETSIA Agricultural Buildings History. 3rd cycle. ETSIA</p> <p>Academic Leadership</p> <ul style="list-style-type: none"> • Technical committee for standarization AENOR CTN 140/SC 1 "Bases de proyecto y acciones en estructuras". • Editorial board of the journal ISI-SCI Spanish Journal of Agricultural Research, official publication of INIA and the Spanish Society of Agricultural Engineering • Editorial board of the journal "Informes de la Construcción" of the Instituto de Ciencias de la Construcción "Eduardo Torroja" belonging to the CSIC • President of the Special Interst Group SE28 "Rural Buildings and Landscape" within the European organization EurAgEng <p>Research interests Rural Buildings, Rural Infrastructures, Silos, Landscape</p> <p>Research income 14 research projects as leader, 10 research projects as collaborator, 21 innovative projects for companies, 4 projects in developing and underdeveloped countries.</p> <p>Publications Refereed journal papers: 53 published Conference publications: 164 Book contributions: 2 edited 7 chapter contributions</p> <p>My Research Team 5 Associate Professors 3 PhD students Supervised 16 PhDs and 12 Masters Currently supervising 3 PhD students 2 Masters student</p> <p>Membership of Societies - Member of Sociedad Española de Mecánica del Suelo e Ingeniería Geotécnica (Spanish Society of Soil Mechanics and Geotechnical Engineering). - Member of Comisión Española de Ingeniería Rural (Spanish Rural Commission). Member of the board from 1996 to 2003 - Member of Sociedad Española de Agroingeniería (Spanish Society of Agro-Engineering). Vice-president from 2003 to 2007. - Member of EurAgEng and CIGR - Member of Comité de Edificación del Instituto de la Ingeniería de España (Spanish Committee of Buildings of the Spanish Engineering Institute)</p>	

Name:	Giacomo Scarascia-Mugnozza
Address:	UNIBA, Department of Engineering and Management of the Agricultural, Livestock and Forest Systems
Summary:	
<p>Qualifications MS in Civil Engineering</p> <p>Current Appointment (since 2001) Full professor in rural structures since 2001 at the Faculty of Agriculture of the University of Bari</p> <p>Teaching. Modules: Forest building construction, Structures and equipment for greenhouses; PhD Courses in "Land and agro-forestry environment engineering"</p> <p>Academic Leadership Director of the Department of Engineering and Management of the Agricultural, Livestock and Forest Systems Academic Co-ordinator of the Lifelong Learning programme Erasmus for the Bilateral agreement with The University of Athens (GR), University of Wageningen (NL) and the University of Valencia (SP).</p> <p>Research interests Materials, indoor environment and structures of the buildings for protected horticultural cultivations, for livestock and agricultural products storage and processing; land and environmental aspects of agricultural structures and constructive solution for reducing environmental impacts.</p> <p>Research income Scientific responsible of the research team of the University of Bari in: EC Collective Research "Labelling agricultural plastic waste for valorising the waste stream - LABELAGRIWASTE" (2006-2009); MIPAF "Research for the improvements of the fruit trees protected cultivation in Southern Italy – FRU.MED." (2005-2009).</p> <p>Publications Refereed journal papers: 45 Conference publications : 107 Book contribution: 1 edited, 4 chapter contributions</p> <p>My Research Team Supervisor of PhDs students</p> <p>Membership of Societies A.I.I.A. (Italian Association of Agricultural Engineering), I.S.H.S. (International Society for Horticultural Science) and S.O.I. (Italian Horticultural Society), Georgofili's Academy of Florence.</p>	

ANNEX 2. TABE.NET MOU

At the time of submission, the final signatures for the MOU were not available. These will be collected before the 31st March 2009.

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
(Virginia Tech)
BLACKSBURG, VIRGINIA, USA

AND

UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN
DUBLIN, IRELAND

AND

UNIVERSIDAD POLITÉCNICA DE MADRID
MADRID, SPAIN

AND

AGRICULTURAL UNIVERSITY OF ATHENS
ATHENS, GREECE

AND

UNIVERSITY OF BARI
BARI, ITALY

AND

UNIVERSITY OF ILLINOIS
URBANA-CHAMPAIGN, ILLINOIS, USA


University College Dublin, Universidad Politécnica de Madrid, Agricultural University of Athens, University of Bari, University of Illinois, and Virginia Polytechnic Institute and State University (Virginia Tech) agree to implement this memorandum of understanding effective when all signatures have been affixed.

This agreement is based on the principle of reciprocity and expresses the interest of all parties in exchanging scholars, students, academic information and materials in the belief that the educational process at all institutions will be enhanced and that mutual understanding between their respective scholars and students will be increased by the establishment of such exchange programs.

1. The universities agree to encourage the development of student and faculty (staff) exchange and curriculum development in the subject area of Biosystems Engineering.
2. The universities recognize that the implementation of any exchange program will depend upon the academic interests and expertise of individual faculty members and upon the availability of financial resources. Accordingly, the implementation of each exchange program based on this agreement shall be separately negotiated and determined by all universities.
3. This agreement is not intended to be a legally binding document. It is meant to describe the nature and to suggest the guidelines of the cooperation described above. Nothing therefore shall diminish the full autonomy of any institution, nor will any constraints be imposed by any upon the others in carrying out the agreement.
4. The agreement shall become effective on the day that representatives of all universities have affixed their signatures and seals, will be in force for a period of six years, and is subject to revision or modification by mutual written agreement. It is also understood that any institution may terminate the agreement at any time, although it is assumed that such action would only be taken after mutual consultation in order to avoid any possible inconvenience to the other institutions.
5. For Virginia Tech, Dr. S. K. De Datta, for University College Dublin, Ms. Catherine Convery, for Universidad Politécnica de Madrid, Dr. M. C. González-Chamorro, for Agricultural University of Athens, Ms. Ismini Valsami, for University of Bari, Dott.ssa Mariangela Latorre, and for University of Illinois, Ms. Andrea B. Bohn shall serve as liaison officers for this agreement.

Dr. Charles Steger
President
Virginia Tech
Blacksburg, VA, USA

Date



Dr. Hugh Brady
President
University College Dublin, National
University of Ireland, Dublin

19/3/09

Date

Dr. S.K. De Datta
Associate Vice President for
International Affairs
Virginia Tech
Blacksburg, VA, USA

Date

Professor Javier Uceda
Rector
Universidad Politécnica de Madrid
Madrid, Spain
By delegation,

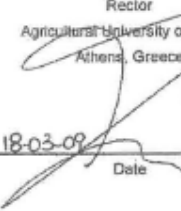
18-03-09

Date




Dr. William I. Brustein
Associate Provost for International
Affairs
University of Illinois
Urbana-Champaign, IL, USA

Date

Professor George Zervas
Rector
Agricultural University of Athens
Athens, Greece

18-03-09

Date



Prof. C. Petrocelli
Rector
University of Bari
Bari, Italy

19-03-2009

Date



ANNEX III



FINANCIAL IDENTIFICATION

PRIVACY STATEMENT

http://ec.europa.eu/budget/execution/fiers_fr.htm

ACCOUNT NAME	
ACCOUNT NAME(1)	UNIVERSITY COLLEGE DUBLIN No.1 A/c
ADDRESS	BELFIELD
	DUBLIN 4.
TOWN/CITY	DUBLIN
POSTCODE	
COUNTRY	IRELAND

CONTACT	JOHN KENNY	
TELEPHONE	01-7161605	FAX 01-7161216
E-MAIL	John.Kenny@ucd.ie	

BANK	
BANK NAME	BANK OF IRELAND
BRANCH ADDRESS	COLLEGE GREEN
TOWN/CITY	DUBLIN 2.
POSTCODE	
COUNTRY	IRELAND
ACCOUNT NUMBER	10016196
IBAN(2)	IE23B0F190001710016196

REMARKS:

BANK STAMP + SIGNATURE OF BANK REPRESENTATIVE
(Both Obligatory)(3)

DATE + SIGNATURE ACCOUNT HOLDER :
(Obligatory)

Helen Muller

DATE 11/3/2009

(1) The name or title under which the account has been opened and not the name of the authorized agent
(2) If the IBAN Code (International Bank account number) is applied in the country where your bank is situated
(3) It is preferable to attach a copy of recent bank statement, in which event the stamp of the bank and the signature of the bank's representative are not required. The signature of the account-holder is obligatory in all cases.

MR JOHN KENNY
 UNIVERSITY COLLEGE DUBLIN
 MICHAEL TIERNEY BUILDING
 BELFIELD
 DUBLIN 4

Your account name **UNIVERSITY COLLEGE DUBLIN
 CURRENT ACCOUNT
 NO 1 ACCOUNT**
 -----R-----

Account number **10016196**

IBAN **IE23 BOFI 9000 1710 0161 96**

Statement date **6 Mar 2009** Number **9704** P

Your Current Account statement

Date	Transaction details	Payments - out	Payments - in	Balance
05 Mar 2009	BALANCE FORWARD			1,580,301.63
06 Mar 2009	CREDIT TRANSFE 19752		5,317.00	
	CREDIT TRANSFE 19828		48,537.04	
	CREDIT TRANSFE 19829		34,819.89	
	2100042594		100.00	
	EDITORIAL GUSTAVO		1,558.26	
	SAN JOSE STATE ELE		1,992.50	
	UCD		3,125.00	
	P01027551		63.00	
	1000 2000036375 K		62,720.00	
	ICAI, Dublin 4		5,150.00	
	EMS715030516488201		145.00	
	EMS818030607165270		700.00	
	SFI FEB GRANT		3,224.64	
	LODGMNT 19417		4,716.00	
	LODGMNT 19448		5,125.87	
	FROM A/C NO 20611511		28,280.24	
	DROSHEAR10471		15,114.58	
	23718293		1,000,000.00	
	CREDIT TRANSFE 19696		59.00	
	CREDIT TRANSFE 19697		1,638.00	
	CHEQUES	78,759.14		
	BOI VISA DD	335.55		
	MRS KATHLEEN MCFAR DD	1,253.12		
	SHEILA VALENTINE DD	1,568.12		
	JAMES AND LYNNE HE DD	4,579.43		
	UNIV. COLL. DUBLIN DD	1,833,844.39		
	UNIVERSITY COLLEGE DD	30,026.65		
	BOL 900017 42887623	10,000.00		
	STOP INST.- CHEQUE	2.54		
	STOP INST.- CHEQUE	2.54		842,316.17

28 Jan 2009 INTEREST RATE PAYABLE FROM DATE 1.400%
 Interest Rates payable are quoted gross on Cleared Credit Balances

Current lending rate applied to this account 2.610%

in all correspondence please quote:
Registration No: 6517386K
NOTICE NO: 06517386-32457K

Kevin McGarry
Dublin Region South City District
Customer Services
85/93 Lr Mount St
Dublin 2.

V453 336 558 336 558 0911027CCEE Dist.002

UNIVERSITY COLLEGE DUBLIN
JOHN KENNY THE BURSARS OFFICE
MICHAEL TIERNEY BUILDING
UCD BELFIELD
DUBLIN 4

Enquiries: 01 6474000

10th Feb 2009

Tax Clearance Certificate

Tax Certificate Number: 06517386-32457K

Valid Until : 20/1/2010

This Tax Clearance Certificate is issued to the person named above to confirm that the persons tax affairs are in order.

Apart from the Standards in Public Office Act, 2001 (for which a separate Certificate is used), this Certificate may be used in any circumstances where production of a Tax Clearance Certificate is required.

Kevin McGarry
Dublin Region South City District

Queries relating to this certificate should be made to the above address.

N 065841

Revenue 

TC 2
TC2